YAMAHA

⚠ Read this manual carefully before operating this vehicle.

OWNER'S MANUAL

VMAX

VMX17A(C)

LIT-11626-24-26

2S3-28199-12

EAU10042

⚠ WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

YAMAHA LIT-CALIF-65-01

⚠ Read this manual carefully before operating this vehicle. This manual should stay with this vehicle if it is sold.

EAU10083

Congratulations on your purchase of the Yamaha VMX17A(C). This model is the result of Yamaha's vast experience in the production of fine sporting, touring, and pacesetting racing machines. It represents the high degree of craftsmanship and reliability that have made Yamaha a leader in these fields.
This manual will give you an understanding of the operation, inspection, and basic maintenance of this motorcycle. If you have any questions concerning the operation or maintenance of your motorcycle, please consult a Yamaha dealer.
The design and manufacture of this Yamaha motorcycle fully comply with the emissions standards for clean air applicable at the date of manufacture. Yamaha has met these standards without reducing the performance or economy of operation of the motorcycle. To maintain these high standards, it is important that you and your Yamaha dealer pay close attention to the recommended maintenance schedules and operating instructions contained within this manual.
Yamaha continually seeks advancements in product design and quality. Therefore, while this manual contains the most current product information available at the time of printing, there may be minor discrepancies between your motorcycle and this manual. If there is any question concerning this manual, please consult a Yamaha dealer.

EWA10011

⚠ WARNING

Please read this manual and the "YOU AND YOUR MOTORCYCLE: RIDING TIPS" booklet carefully before operating this motorcycle. Do not attempt to operate this motorcycle until you have attained adequate knowledge of its controls and operating features. Regular inspections and careful maintenance, along with good operating techniques, will help ensure that you safely enjoy the capabilities and reliability of this motorcycle.

IMPORTANT MANUAL INFORMATION

EAU10132

Particularly important information is distinguished in this manual by the following notations:

⚠	**This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.**
⚠ WARNING	**A WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.**
NOTICE	**A NOTICE indicates special precautions that must be taken to avoid damage to the vehicle or other property.**
TIP	A TIP provides key information to make procedures easier or clearer.

IMPORTANT MANUAL INFORMATION

EAU10193

VMX17A(C)
OWNER'S MANUAL
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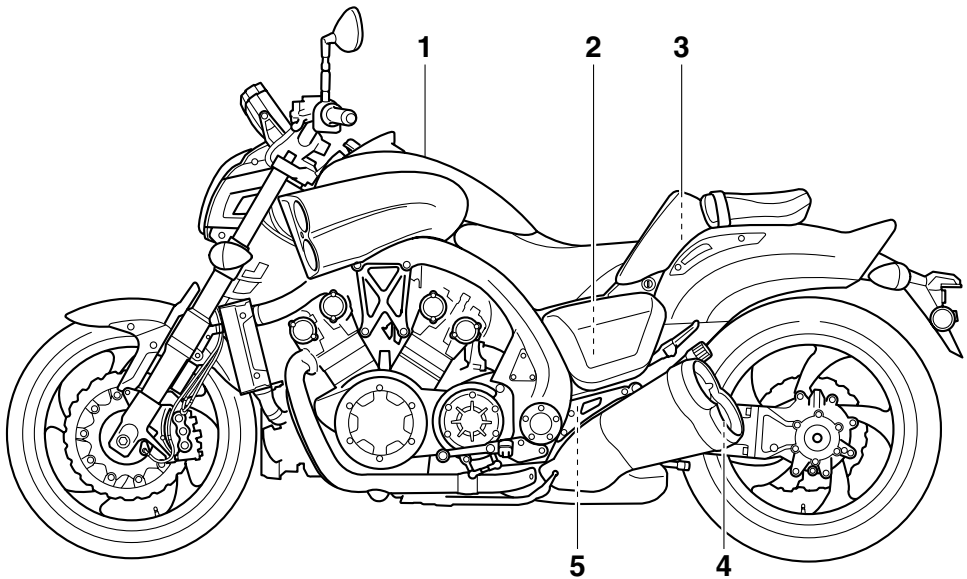
LOCATION OF IMPORTANT LABELS

EAU10384

1

Read and understand all of the labels on your vehicle. They contain important information for safe and proper operation of your vehicle. Never remove any labels from your vehicle. If a label becomes difficult to read or comes off, a replacement label is available from your Yamaha dealer.



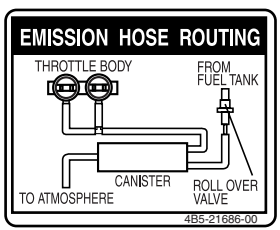
1

⚠ WARNING

- **BEFORE YOU OPERATE THIS VEHICLE, READ THE OWNER'S MANUAL AND ALL LABELS.**
- **ALWAYS WEAR AN APPROVED MOTORCYCLE HELMET,** eye protection, and protective clothing.

5GK-2119K-00

2 California Only



3

PREMIUM UNLEADED GASOLINE ONLY
91 Min. Pump Octane (R+M) / 2

5PW-2415E-11

4

TIRE INFORMATION

Cold tire normal pressure should be set as follows.

• Up to 90 kg (198 lbs) load
FRONT : 250 kPa, (2.50 kgf/cm²), 36 psi
REAR : 290 kPa, (2.90 kgf/cm²), 42 psi
• 90kg (198 lbs) ~ maximum load
FRONT : 250 kPa, (2.50 kgf/cm²), 36 psi
REAR : 290 kPa, (2.90 kgf/cm²), 42 psi

2S3-21668-00

5

⚠ WARNING

This unit contains high pressure nitrogen gas. Mishandling can cause explosion.

- Read owner's manual for instructions.
- Do not incinerate, puncture or open.

4AA-22259-80

EAU10287

Be a Responsible Owner

As the vehicle's owner, you are responsible for the safe and proper operation of your motorcycle.

Motorcycles are single-track vehicles. Their safe use and operation are dependent upon the use of proper riding techniques as well as the expertise of the operator. Every operator should know the following requirements before riding this motorcycle.

He or she should:

- Obtain thorough instructions from a competent source on all aspects of motorcycle operation.
- Observe the warnings and maintenance requirements in this Owner's Manual.
- Obtain qualified training in safe and proper riding techniques.
- Obtain professional technical service as indicated in this Owner's Manual and/or when made necessary by mechanical conditions.

Safe Riding

Perform the pre-operation checks each time you use the vehicle to make sure it is in safe operating condition. Failure to inspect or maintain the vehicle properly increases the possibility of an accident or equipment damage. See page 5-1 for a list of pre-operation checks.

- This motorcycle is designed to carry the operator and a passenger.
- The failure of motorists to detect and recognize motorcycles in traffic is the predominating cause of automobile/motorcycle accidents. Many accidents have been caused by an automobile driver who did not see the motorcycle. Making yourself conspicuous appears to be very effective in reducing the chance of this type of accident.

  Therefore:

  - Wear a brightly colored jacket.
  - Use extra caution when you are approaching and passing through intersections, since intersections are the most likely places for motorcycle accidents to occur.
  - Ride where other motorists can see you. Avoid riding in another motorist's blind spot.
- Many accidents involve inexperienced operators. In fact, many operators who have been involved in accidents do not even have a current motorcycle license.
  - Make sure that you are qualified and that you only lend your motorcycle to other qualified operators.
  - Know your skills and limits. Staying within your limits may help you to avoid an accident.
  - We recommend that you practice riding your motorcycle where there is no traffic until you have become thoroughly familiar with the motorcycle and all of its controls.
- Many accidents have been caused by error of the motorcycle operator. A typical error made by the operator is veering wide on a turn

due to excessive speed or undercornering (insufficient lean angle for the speed).
  - Always obey the speed limit and never travel faster than warranted by road and traffic conditions.
  - Always signal before turning or changing lanes. Make sure that other motorists can see you.
- The posture of the operator and passenger is important for proper control.
  - The operator should keep both hands on the handlebar and both feet on the operator footrests during operation to maintain control of the motorcycle.
  - The passenger should always hold onto the operator, the seat strap or grab bar, if equipped, with both hands and keep both feet on the passenger footrests. Never carry a passenger unless he or she can firmly place both feet on the passenger footrests.
- Never ride under the influence of alcohol or other drugs.
- This motorcycle is designed for on-road use only. It is not suitable for off-road use.

Protective Apparel

The majority of fatalities from motorcycle accidents are the result of head injuries. The use of a safety helmet is the single most critical factor in the prevention or reduction of head injuries.

- Always wear an approved helmet.
- Wear a face shield or goggles. Wind in your unprotected eyes could contribute to an impairment of vision that could delay seeing a hazard.
- The use of a jacket, heavy boots, trousers, gloves, etc., is effective in preventing or reducing abrasions or lacerations.
- Never wear loose-fitting clothes, otherwise they could catch on the control levers, footrests, or wheels and cause injury or an accident.
- Always wear protective clothing that covers your legs, ankles, and feet. The engine or exhaust system become very hot during or after operation and can cause burns.
- A passenger should also observe the above precautions.

Avoid Carbon Monoxide Poisoning

All engine exhaust contains carbon monoxide, a deadly gas. Breathing carbon monoxide can cause headaches, dizziness, drowsiness, nausea, confusion, and eventually death.

Carbon Monoxide is a colorless, odorless, tasteless gas which may be present even if you do not see or smell any engine exhaust. Deadly levels of carbon monoxide can collect rapidly and you can quickly be overcome and unable to save yourself. Also, deadly levels of carbon monoxide can linger for hours or days in enclosed or poorly ventilated areas. If you experience any symptoms of carbon monoxide poisoning, leave the area immediately, get fresh air, and SEEK MEDICAL TREATMENT.

- Do not run engine indoors. Even if you try to ventilate engine exhaust with fans or open windows and doors, carbon monoxide can rapidly reach dangerous levels.

- Do not run engine in poorly ventilated or partially enclosed areas such as barns, garages, or carports.
- Do not run engine outdoors where engine exhaust can be drawn into a building through openings such as windows and doors.

Loading

Adding accessories or cargo to your motorcycle can adversely affect stability and handling if the weight distribution of the motorcycle is changed. To avoid the possibility of an accident, use extreme caution when adding cargo or accessories to your motorcycle. Use extra care when riding a motorcycle that has added cargo or accessories. Here, along with the information about accessories below, are some general guidelines to follow if loading cargo to your motorcycle:

The total weight of the operator, passenger, accessories and cargo must not exceed the maximum load limit. **Operation of an overloaded vehicle could cause an accident.**

Maximum load:
VMX17A 190 kg (419 lb)
VMX17AC 189 kg (417 lb)

When loading within this weight limit, keep the following in mind:

- Cargo and accessory weight should be kept as low and close to the motorcycle as possible. Securely pack your heaviest items as close to the center of the vehicle as possible and make sure to distribute the weight as evenly as possible on both sides of the motorcycle to minimize imbalance or instability.
- Shifting weights can create a sudden imbalance. Make sure that accessories and cargo are securely attached to the motorcycle before riding. Check accessory mounts and cargo restraints frequently.
  - Properly adjust the suspension for your load (suspension-adjustable models only), and check the condition and pressure of your tires.
  - Never attach any large or heavy items to the handlebar, front fork, or front fender. These items, including such cargo as sleeping bags, duffel bags, or tents, can create unstable handling or a slow steering response.
- **This vehicle is not designed to pull a trailer or to be attached to a sidecar.**

Genuine Yamaha Accessories

Choosing accessories for your vehicle is an important decision. Genuine Yamaha accessories, which are available only from a Yamaha dealer, have been designed, tested, and approved by Yamaha for use on your vehicle.

Many companies with no connection to Yamaha manufacture parts and accessories or offer other modifications for Yamaha vehicles. Yamaha is not in a position to test the products that these aftermarket companies produce. Therefore, Yamaha can neither endorse nor recommend the use of accessories not sold by Yamaha or

modifications not specifically recommended by Yamaha, even if sold and installed by a Yamaha dealer.

Aftermarket Parts, Accessories, and Modifications

While you may find aftermarket products similar in design and quality to genuine Yamaha accessories, recognize that some aftermarket accessories or modifications are not suitable because of potential safety hazards to you or others. Installing aftermarket products or having other modifications performed to your vehicle that change any of the vehicle's design or operation characteristics can put you and others at greater risk of serious injury or death. You are responsible for injuries related to changes in the vehicle.

Keep the following guidelines in mind, as well as those provided under "Loading" when mounting accessories.

- Never install accessories or carry cargo that would impair the performance of your motorcycle. Carefully inspect the accessory before using it to make sure that it does not in any way reduce ground clearance or cornering clearance, limit suspension travel, steering travel or control operation, or obscure lights or reflectors.
  - Accessories fitted to the handlebar or the front fork area can create instability due to improper weight distribution or aerodynamic changes. If accessories are added to the handlebar or front fork area, they must be as lightweight as possible and should be kept to a minimum.
  - Bulky or large accessories may seriously affect the stability of the motorcycle due to aerodynamic effects. Wind may attempt to lift the motorcycle, or the motorcycle may become unstable in cross winds. These accessories may also cause instability when passing or being passed by large vehicles.
  - Certain accessories can displace the operator from his or her normal riding position. This improper position limits the freedom of movement of the operator and may limit control ability, therefore, such accessories are not recommended.
- Use caution when adding electrical accessories. If electrical accessories exceed the capacity of the motorcycle's electrical system, an electric failure could result, which could cause a dangerous loss of lights or engine power.

Aftermarket Tires and Rims

The tires and rims that came with your motorcycle were designed to match the performance capabilities and to provide the best combination of handling, braking, and comfort. Other tires, rims, sizes, and combinations may not be appropriate. Refer to page 7-22 for tire specifications and more information on replacing your tires.

Transporting the Motorcycle

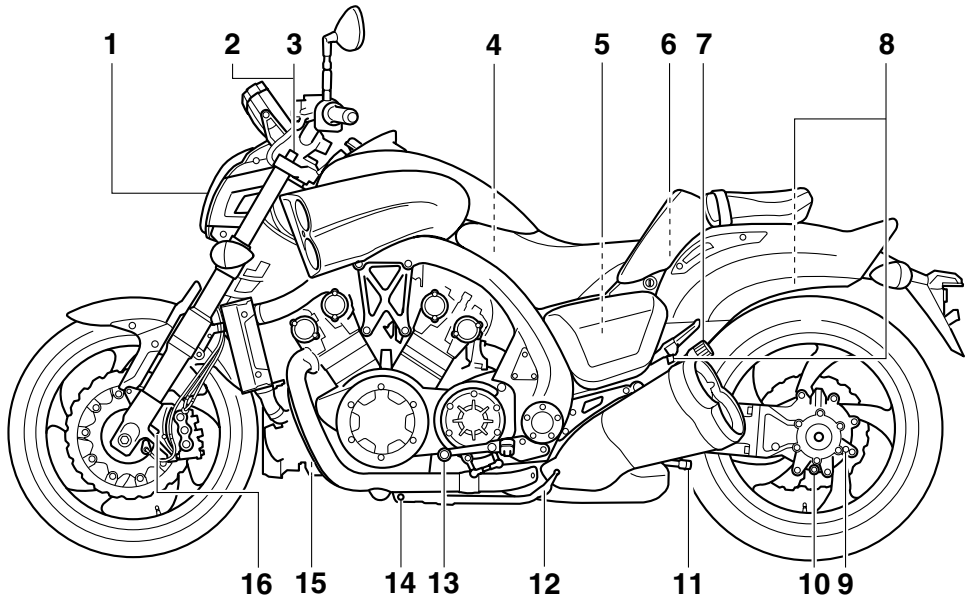
Be sure to observe following instructions before transporting the motorcycle in another vehicle.

- Remove all loose items from the motorcycle.

- Check that the fuel cock (if equipped) is in the “OFF” position and that there are no fuel leaks.
- Point the front wheel straight ahead on the trailer or in the truck bed, and choke it in a rail to prevent movement.
- Shift the transmission in gear (for models with a manual transmission).
- Secure the motorcycle with tie-downs or suitable straps that are attached to solid parts of the motorcycle, such as the frame or upper front fork triple clamp (and not, for example, to rubber-mounted handlebars or turn signals, or parts that could break). Choose the location for the straps carefully so the straps will not rub against painted surfaces during transport.
- The suspension should be compressed somewhat by the tie-downs, if possible, so that the motorcycle will not bounce excessively during transport.

EAU10410

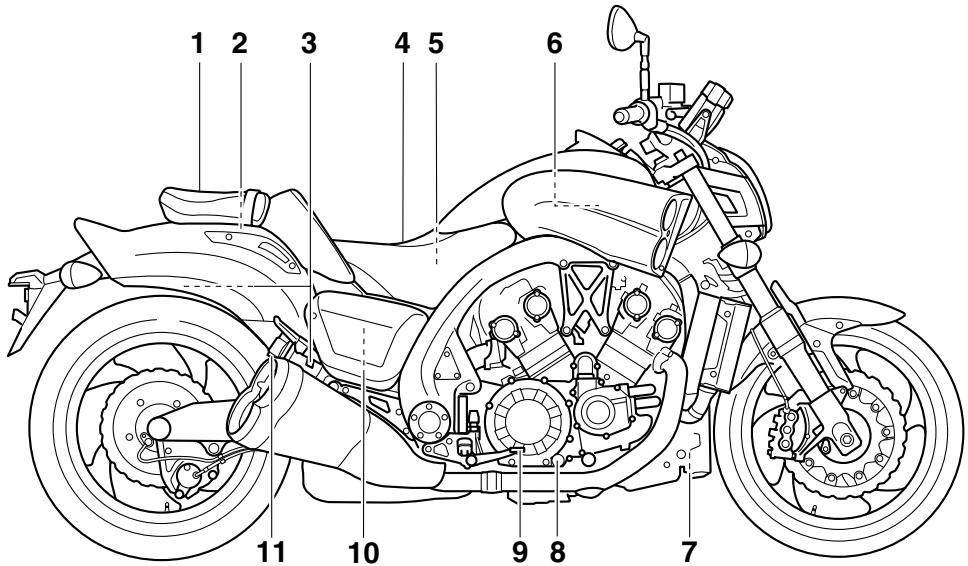
Left view



1. Headlight (page 7-36)
2. Front fork spring preload adjusting bolt (page 4-23)
3. Front fork rebound damping force adjusting knob (page 4-23)
4. Battery (page 7-32)
5. Owner's tool kit (page 7-2)
6. Fuel tank cap (page 4-18)
7. Shock absorber assembly spring preload adjusting knob (page 4-25)
8. Luggage strap holder (page 4-27)
9. Final gear oil check bolt (page 7-15)
10. Final gear oil drain bolt (page 7-15)
11. Shock absorber assembly rebound damping force adjusting knob (page 4-25)
12. Sidestand (page 4-28)
13. Shift pedal (page 4-16)
14. Engine oil drain bolt (page 7-12)
15. Engine oil filter cartridge (page 7-12)
16. Front fork compression damping force adjusting screw (page 4-23)

EAU10420

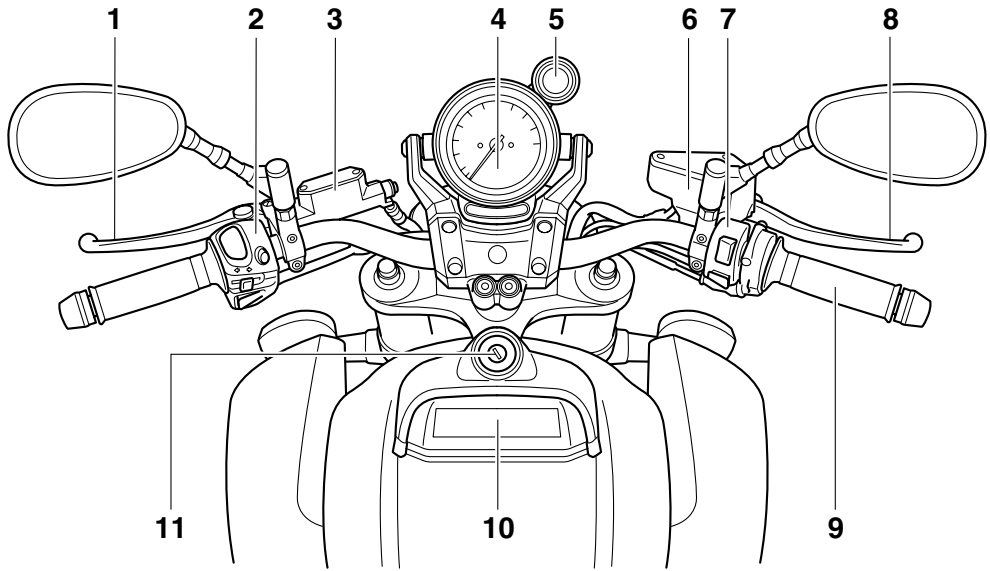
Right view



1. Passenger seat (page 4-22)
2. Rear brake fluid reservoir (page 7-26)
3. Luggage strap holder (page 4-27)
4. Rider seat (page 4-22)
5. Fuse box 1 (page 7-34)
6. Radiator cap (page 7-18)
7. Coolant reservoir (page 7-18)
8. Engine oil level check window (page 7-12)
9. Brake pedal (page 4-17)
10. Fuse box 2 (page 7-34)
11. Shock absorber assembly compression damping force adjusting knob (page 4-25)

EAU10430

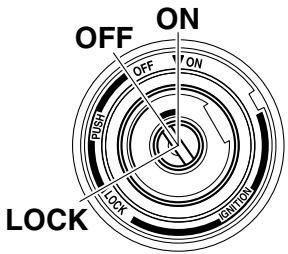
Controls and instruments



1. Clutch lever (page 4-15)
2. Left handlebar switches (page 4-14)
3. Clutch fluid reservoir (page 7-26)
4. Speedometer unit (page 4-5)
5. Shift timing indicator light (page 4-4)
6. Front brake fluid reservoir (page 7-26)
7. Right handlebar switches (page 4-14)
8. Brake lever (page 4-16)
9. Throttle grip (page 7-21)
10. Multi-function display (page 4-6)
11. Main switch/steering lock (page 4-1)

EAU10460

Main switch/steering lock



The main switch/steering lock controls the ignition and lighting systems, and is used to lock the steering. The various positions are described below.

EAU39242

ON

All electrical circuits are supplied with power, and the meter lighting, taillight, license plate light, auxiliary light and position lights come on, and the engine can be started. The key cannot be removed.

TIP

The headlight comes on automatically when the engine is started and stays on until the key is turned to “OFF”, even if the engine stalls.

EAU10661

OFF

All electrical systems are off. The key can be removed.

EWA10061

WARNING

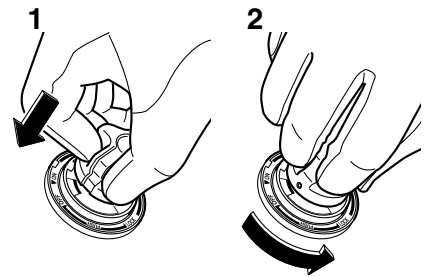
Never turn the key to “OFF” or “LOCK” while the vehicle is moving. Otherwise the electrical systems will be switched off, which may result in loss of control or an accident.

EAU10683

LOCK

The steering is locked, and all electrical systems are off. The key can be removed.

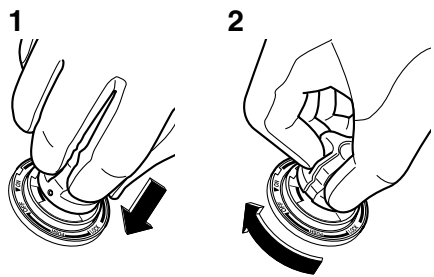
To lock the steering



1. Push.
2. Turn.

1. Turn the handlebars all the way to the left.
2. Push the key in from the “OFF” position, and then turn it to “LOCK” while still pushing it.
3. Remove the key.

To unlock the steering

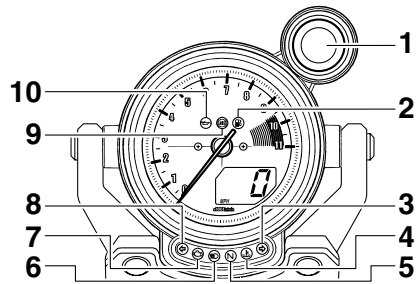


1. Push.
2. Turn.

Push the key in, and then turn it to "OFF" while still pushing it.

EAU49391

Indicator lights and warning lights



1. Shift timing indicator light
2. Fuel level warning light "⛽"
3. Right turn signal indicator light "⇨"
4. Coolant temperature warning light "🌡"
5. Neutral indicator light "**N**"
6. High beam indicator light "≣D"
7. Engine trouble warning light "🔧"
8. Left turn signal indicator light "⇦"
9. Anti-lock Brake System (ABS) warning light "(ABS)"
10. Oil level warning light "🛢"

EAU11030

Turn signal indicator lights "⇦" and "⇨"

The corresponding indicator light flashes when the turn signal switch is pushed to the left or right.

EAU11060

Neutral indicator light "N"

This indicator light comes on when the transmission is in the neutral position.

EAU11080

High beam indicator light "≣D"

This indicator light comes on when the high beam of the headlight is switched on.

EAU46565

Oil level warning light "🛢"

This warning light comes on if the engine oil level is low.

To check the electrical circuit of the warning light, place the vehicle on a level surface, set the engine stop switch to "◯" and turn the key from "OFF" to "ON".

If the warning light does not come on for a few seconds and then go off, have a Yamaha dealer check the electrical circuit.

If the warning light stays on, proceed as follows.

1. Set the engine stop switch to "◯".
2. Turn the key to "OFF", wait two minutes, and then turn the key to "ON".

3. If the warning light comes on and does not go off, check the engine oil level. (See page 7-12.) If the warning light still stays on after confirming the oil level is correct, have a Yamaha dealer check the vehicle.

TIP

- This warning light **will not** come on:
  - when the engine is idling
  - when riding
  - if the engine has stalled and the key has not been turned from "ON" to "OFF" and then back to "ON"

  However, if the warning light is on when the engine is started, it will stay on until the key is turned to "OFF".
- This model is also equipped with a self-diagnosis device for the oil level detection circuit. If a problem is detected in the oil level detection circuit, the following cycle will be repeated until the malfunction is corrected: The oil level warning light will flash ten times, then go off for 2.5 seconds. If this occurs, have a Yamaha dealer check the vehicle.

EAU48700

Fuel level warning light "⛽"

This warning light comes on when the fuel level drops below approximately 3.9 L (1.03 US gal, 0.86 Imp.gal). When this occurs, refuel as soon as possible.
The electrical circuit of the warning light can be checked by turning the key to "ON". The warning light should come on for a few seconds, and then go off.
If the warning light does not come on initially when the key is turned to "ON", or if the warning light remains on, have a Yamaha dealer check the electrical circuit.

TIP

This model is also equipped with a self-diagnosis device for the fuel level detection circuit. If a problem is detected in the fuel level detection circuit, the following cycle will be repeated until the malfunction is corrected: The fuel level warning light, the fuel meter and the fuel level warning indicator will flash eight times, and then go off for 3.0 seconds. If this occurs, have a Yamaha dealer check the vehicle.

EAU11444

Coolant temperature warning light "🌡"

This warning light comes on if the engine overheats. If this occurs, stop the engine immediately and allow the engine to cool.
The electrical circuit of the warning light can be checked by turning the key to "ON". The warning light should come on for a few seconds, and then go off.
If the warning light does not come on initially when the key is turned to "ON", or if the warning light remains on, have a Yamaha dealer check the electrical circuit.

ECA10021

NOTICE

Do not continue to operate the engine if it is overheating.

TIP

- For radiator-fan-equipped vehicles, the radiator fan(s) automatically switch on or off according to the coolant temperature in the radiator.
- If the engine overheats, see page 7-42 for further instructions.

EAU42774

Engine trouble warning light "🔧"

This warning light comes on if a problem is detected in the electrical circuit monitoring the engine. If this occurs, have a Yamaha dealer check the self-diagnosis system. (See page 4-14 for an explanation of the self-diagnosis device.)

The electrical circuit of the warning light can be checked by turning the key to "ON". The warning light should come on for a few seconds, and then go off.

If the warning light does not come on initially when the key is turned to "ON", or if the warning light remains on, have a Yamaha dealer check the electrical circuit.

EAU39502

ABS warning light "(ABS)"

If this warning light comes on or flashes while riding, the ABS may not work correctly. If this occurs, have a Yamaha dealer check the system as soon as possible. (See page 4-17.)

EWA10081

⚠ WARNING

If the ABS warning light comes on or flashes while riding, the brake system reverts to conventional braking. Therefore, be careful not to cause the wheels to lock during emergency braking. If the warning light comes on or flashes while riding, have a Yamaha dealer check the brake system as soon as possible.

The electrical circuit of the warning light can be checked by turning the key to "ON". The warning light should come on for a few seconds, and then go off.

If the warning light does not come on initially when the key is turned to "ON", or if the warning light remains on, have a Yamaha dealer check the electrical circuit.

EAU48520

Shift timing indicator light

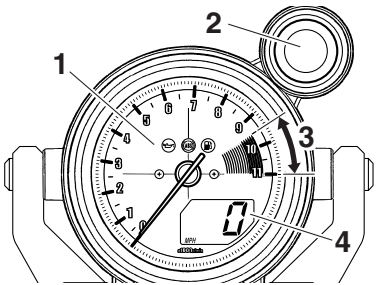
This indicator light can be set to come on and go off at the desired engine speeds and is used to inform the rider when it is time to shift to the next higher gear.

The electrical circuit of the indicator light can be checked by turning the key to "ON". The indicator light should come on for a few seconds, and then go off.

If the indicator light does not come on initially when the key is turned to "ON", or if the indicator light remains on, have a Yamaha dealer check the electrical circuit. (See page 4-7 for a detailed explanation of the function of this indicator light and on how to set it.)

Speedometer unit

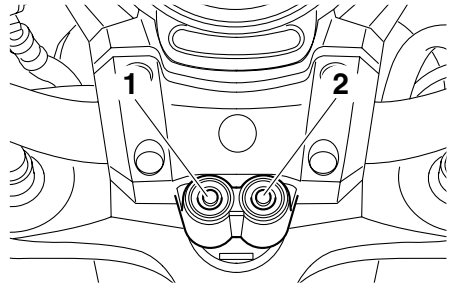
EAU46354



1. Tachometer
2. Shift timing indicator light
3. Tachometer red zone
4. Speedometer

Speedometer

The speedometer can be switched between miles and kilometers. To switch the speedometer, press the “SELECT” button for at least two seconds.
A “SELECT” button and a “RESET” button are located on the handlebar holder.



1. “SELECT” button
2. “RESET” button

Tachometer

The tachometer allows the rider to monitor the engine speed and keep it within the ideal power range. When the key is turned to “ON”, the tachometer needle will sweep once across the r/min range and then return to zero r/min in order to test the electrical circuit.

ECA10031

NOTICE

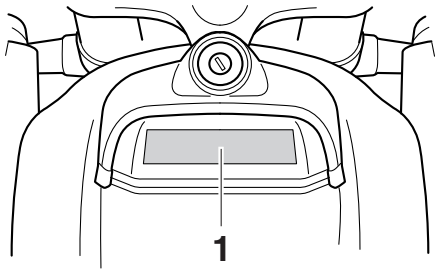
Do not operate the engine in the tachometer red zone.
Red zone: 9500 r/min and above

Shift timing indicator light

See page 4-7 for an explanation and settings for this indicator light.

EAU46598

Multi-function display



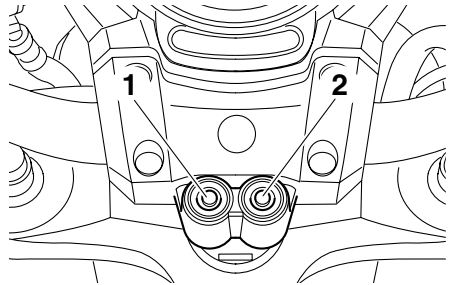
1. Multi-function display

EWA12312

⚠ WARNING

Be sure to stop the vehicle before making any setting changes to the multi-function display. Changing settings while riding can distract the operator and increase the risk of an accident.

A “SELECT” button and a “RESET” button are located on the handlebar holder. These buttons allow you to control or change the settings in the multi-function display.



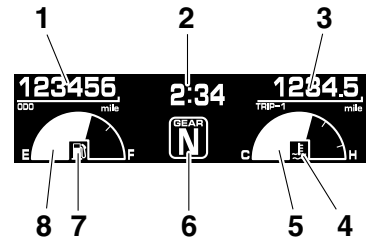
1. “SELECT” button
2. “RESET” button

The multi-function display is set to the Normal mode every time the key is turned to “ON”.

Normal mode

The following functions are available in the Normal mode:

- an odometer
- a clock
- two tripmeters (which show the distance traveled since they were last set to zero)
- a fuel reserve tripmeter (which shows the distance traveled since the fuel level warning light came on)
- a fuel meter
- a transmission gear indicator
- a coolant temperature meter
- a self-diagnosis device



1. Odometer
2. Clock
3. Tripmeter/fuel reserve tripmeter
4. Coolant temperature warning indicator “ ”
5. Coolant temperature meter
6. Transmission gear indicator
7. Fuel level warning indicator “ ”
8. Fuel meter

TIP

The speedometer and odometer/tripmeter displays can be switched between miles and kilometers. To switch the speedometer and odometer/tripmeter displays, press “SELECT” for at least two seconds.

Tripmeters

Turn the key to "ON". Push "SELECT" to switch the display between the tripmeters "TRIP-1" and "TRIP-2" in the following order.

TRIP-1 → TRIP-2 → TRIP-1

When the fuel amount in the fuel tank decreases to 3.9 L (1.03 US gal, 0.86 Imp.gal), the fuel level warning light comes on, and the tripmeter automatically changes to the fuel reserve tripmeter "TRIP-F" and starts counting the distance traveled from that point. In that case, push "SELECT" to switch the display between the various tripmeters in the following order:

TRIP-F → TRIP-1 → TRIP-2 → TRIP-F

If you continue to ride the vehicle after the fuel reserve tripmeter "TRIP-F" appears, the fuel meter and fuel level warning indicator "⛽" start flashing.

To reset a tripmeter, select it by pushing "SELECT", and then push "RESET" for at least one second. If you do not reset the fuel reserve tripmeter manually, it resets itself automatically and the display returns to the prior meter after refueling and traveling 5 km (3 mi).

Fuel meter

The fuel meter indicates the amount of fuel in the fuel tank. The fuel level displayed decreases towards "E" (Empty) as the fuel tank level decreases. When the fuel amount in the fuel tank decreases to 3.9 L (1.03 US gal, 0.86 Imp.gal), the fuel level warning light comes on. If this occurs, refuel as soon as possible.

If you continue to ride the vehicle after the fuel reserve tripmeter "TRIP-F" appears, the fuel meter and fuel level warning indicator "⛽" start flashing.

Transmission gear indicator

This indicator shows the selected gear. The neutral position is indicated by "**N**" and by the neutral indicator light.

Coolant temperature meter

With the key in the "ON" position, the coolant temperature meter indicates the temperature of the coolant. The coolant temperature varies with changes in the weather and engine load. If the coolant temperature warning light comes on, and the top segment and the coolant temperature warning indicator flash, stop the vehicle and let the engine cool. (See page 7-42.)

ECA10021

NOTICE

Do not continue to operate the engine if it is overheating.

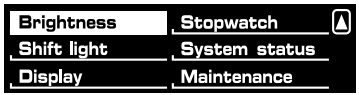
Select mode

The various functions of this multi-function display are adjusted in the Select mode.

TIP

- The transmission must be in neutral to change settings in this mode.
- Shifting the transmission into gear saves all settings made, then cancels the Select mode and displays the Normal mode in all screens.
- Depending on the screen, pushing "RESET" saves settings or cancels the Select mode to display the Normal mode.

Push and hold "SELECT" and "RESET" for at least three seconds to enter the Select mode.



The following items can be set/adjusted in this mode:

- brightness
- shift timing indicator light
- clock
- stopwatch
- countdown clock
- system status
- maintenance counters

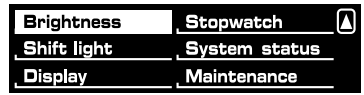
TIP

To return to the Normal mode, push "SELECT" to scroll to "▲", then push "RESET".

Adjusting the brightness

This function allows you to adjust the brightness of the tachometer panel and speedometer ("Meter panel"), the tachometer needle ("Needle"), and the multi-function display ("Display") to suit the outside lighting conditions.

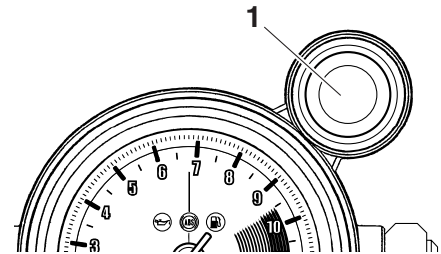
1. Push "SELECT" to highlight "Brightness".



2. Push "RESET", then push "SELECT" to scroll through the functions and to highlight an item.

3. Push "RESET"; the brightness level segments for the selected item starts flashing.
4. Push "SELECT" to highlight the desired brightness level.
5. Push "RESET" to set the brightness level.
6. Push "SELECT" to scroll to "▲", then push "RESET" to return to the previous menu.

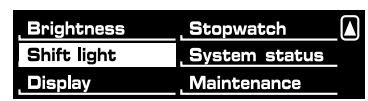
Selecting the shift timing indicator light settings



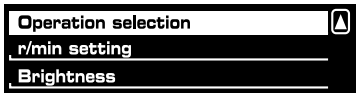
1. Shift timing indicator light

This function allows you to choose whether or not the shift timing indicator light is activated and whether it flashes or stays on when activated.

1. Push "SELECT" to highlight "Shift light".



2. Push "RESET".
3. Push "SELECT" to highlight "Operation selection".



4. Push “RESET”.
   Push “SELECT” and highlight “On” to activate the indicator light; the indicator light comes on and stays on when activated.

Push “SELECT” and highlight “Flash” to activate the indicator light; the indicator light flashes when activated.

Push “SELECT” and highlight “Off” to deactivate the indicator light; the indicator light neither comes on nor flashes.

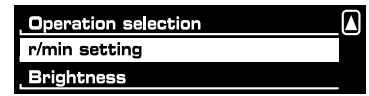
TIP

The indicator light flashes once every two seconds to show that it has been deactivated. The indicator light goes off after this menu is exited.

5. Push “RESET” to set the shift timing indicator light activity.
6. Push “RESET” again to return to the previous menu.

Setting the r/min in relation to the shift timing indicator light

This function allows you to select the engine speed at which the indicator light is activated and deactivated. All gears can be set to the same activation/deactivation r/min or the gears can be set individually.
Push “SELECT” to highlight “r/min setting”, then push “RESET”.



TIP

The shift timing indicator light can be set to activate between 3000 r/min and 10500 r/min and deactivate between 3500 r/min and 11000 r/min in increments of 500 r/min.

To set all gears to the same r/min:

1. Push “SELECT” to highlight “All”.

2. Push “RESET”; “On” is displayed.

3. Push “RESET” and the r/min digits start flashing.
4. Push “SELECT” to highlight the engine speed at which the shift timing indicator light is activated.

5. Push “RESET” to set the selected engine speed. “Off” is highlighted and the r/min digits start flashing.
6. Push “SELECT” to highlight the engine speed at which the shift timing indicator light is deactivated.
7. Push “RESET” to set the selected engine speed.
8. Push “RESET” again to return to the previous menu.

To set individual gear r/min:

1. Push “SELECT” to highlight gears from “1st” through “5th”, then push “RESET”.

2. Push “RESET” and the r/min digits for the highlighted gear start flashing, then perform steps 4–8 under “To set all gears to the same r/min:” in order to set the r/min for the individual gears.

TIP

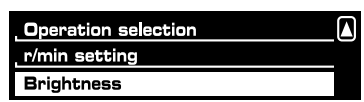
After setting r/min for individual gears, if “All” is chosen, all previously set r/min for individual gears return to the default settings of 9000 (activation) and 11000 (deactivation).

3. Push “SELECT” to scroll to “▲”, then push “RESET” to return to the previous menu.

Setting the shift timing indicator light brightness

This function allows you to adjust the brightness of the shift timing indicator light.

1. Push “SELECT” to highlight “Brightness”.

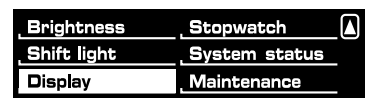


2. Push “RESET” and the brightness level segments start flashing.

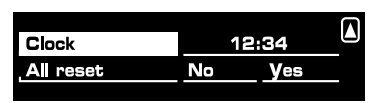
3. Push “SELECT” to highlight the desired brightness level.
4. Push “RESET” to set the selected brightness level.
5. Push “RESET” to return to the previous menu.
6. Push “SELECT” to scroll to “▲”, then push “RESET”. This allows you to select another item in the menu.

Setting the clock

1. Push “SELECT” to highlight “Display”.



2. Push “RESET”; the following screen is displayed.



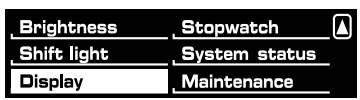
3. Push “RESET” and the hour digits start flashing.
4. Push “SELECT” to increment the hours.

5. Push “RESET”, and the minute digits start flashing.
6. Push “SELECT” to increment the minutes.
7. Push “RESET” to start the clock.
8. Push “RESET” again to return to the previous menu.

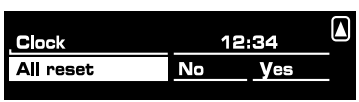
Resetting all the brightness and shift timing indicator light functions:

This resets **all** settings made to the brightness and shift timing indicator light functions.

1. Push “SELECT” to highlight “Display”.



2. Push “RESET”.
3. Push “SELECT” to highlight “All reset”.



4. Push “RESET”, then push “SELECT” to highlight “Yes”.

5. Push “RESET” to reset the brightness and shift timing light indicator values to the factory setting. The display returns to the Normal mode.

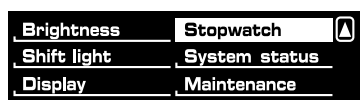
TIP

To perform further multi-function display settings, enter the Select mode again by pushing and holding “SELECT” and “RESET” for at least three seconds.

Using the stopwatch

The stopwatch can be activated as follows.

1. Push “SELECT” to highlight “Stopwatch”.



2. Push “RESET”.
3. Push “SELECT” to highlight “Stopwatch”.

4. Push “RESET”.
   The multi-function display changes to the Normal mode and the stopwatch is displayed in place of the clock.

5. Push “SELECT” to start the stopwatch.
6. Push the start switch “⏻” or “SELECT” to stop the stopwatch.
7. Push “RESET” to reset the stopwatch.

TIP

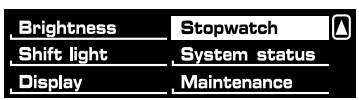
- If neither “SELECT” nor “RESET” are pushed for one minute, the screen automatically changes to the Normal mode.

- Pushing “RESET” for at least two seconds changes the screen to the Normal mode.
- To perform further multi-function display settings, enter the Select mode again by pushing and holding “SELECT” and “RESET” for at least three seconds.

Using the countdown clock:

The countdown clock can be activated as follows.

1. Push “SELECT” to highlight “Stopwatch”.



2. Push “RESET”.
3. Push “SELECT” to highlight “Countdown”.

4. Push “RESET”. The multi-function display changes to the Normal mode, the stopwatch is displayed in place of the clock, and the transmission gear indicator changes to the countdown clock.

5. Push “SELECT” or shift into gear and the countdown clock starts counting down from “5”. Simultaneously, the shift timing indicator light flashes according to the number displayed (i.e., when “5” is displayed, the indicator light flashes five times, when “4” is displayed, the indicator light flashes four times, etc.). The stopwatch starts counting when the countdown clock finishes counting.
6. Push the start switch “⟲” or “SELECT” to stop the countdown clock.
7. Push “RESET” to reset the countdown clock and stopwatch.
8. Repeat steps 5–6, **or** push “RESET” again for at least two seconds to enter the Normal mode.

TIP

To perform further multi-function display settings, **be sure the transmission is in neutral,** then enter the Select mode again by pushing and holding “SELECT” and “RESET” for at least three seconds.

Checking and resetting the system status

The status/readings of the following items are displayed, and the tripmeters can be reset.

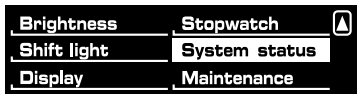
- tripmeters and odometer
- fuel consumption
- air intake temperature
- throttle opening position

TIP

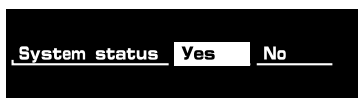
- The “System status” menu cannot be entered if the fuel level warning light or coolant temperature warning light is on.
- If, when the engine is running while the system status menu is displayed, the fuel level warning

light or coolant temperature warning light comes on, the Normal mode is automatically displayed.

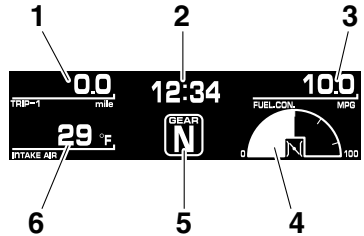
1. Push “SELECT” to highlight “System status”, then push “RESET”.



2. Push “SELECT” to highlight “Yes”, then push “RESET”. (Highlighting “No” and pushing “RESET” returns to the previous menu.)



The display changes to the status screen.



1. Odometer/tripmeter/fuel reserve tripmeter
2. Clock
3. Instantaneous fuel consumption
4. Throttle opening position display
5. Transmission gear indicator
6. Air intake temperature display

Push “SELECT” and the various tripmeters and the odometer are displayed in the following order:
(TRIP-F) → TRIP-1 → TRIP-2 → ODO → (TRIP-F)
Push “RESET” to reset a tripmeter.

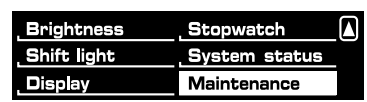
TIP

- Push “SELECT” for at least two seconds to switch between miles and kilometers.
- Pushing “RESET” displays the Normal mode for five seconds. Pushing “SELECT” and “RESET” for at least three seconds, changes the display to the Normal mode.
- To perform further multi-function display settings, enter the Select mode again by pushing and holding “SELECT” and “RESET” for at least three seconds.

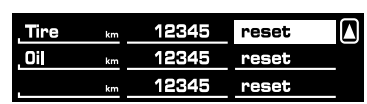
Resetting the maintenance counters

This function allows you to reset the maintenance counters for the tires, the engine oil, and an item of your choice.

1. Push “SELECT” to highlight “Maintenance”.



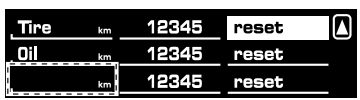
2. Push “RESET”.
3. Push “SELECT” to highlight the item to reset.



4. Push “RESET” to reset the item.

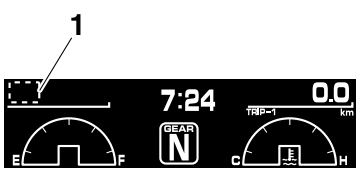
TIP

- The bottom area was left blank for another item the rider cares to check the distance of since it has been changed, replaced or checked (i.e., air filter element, engine parts, etc.).
- Letters and numbers cannot be entered in the blank area.



5. Push “SELECT” to scroll to “ ”.
6. Push “RESET” to return to the previous menu.

Self-diagnosis device



1. Error code display

TIP

The display indicates error codes only in the Normal mode.

This model is equipped with a self-diagnosis device for various electrical circuits.
If a problem is detected in any of those circuits, the engine trouble warning light comes on and the display indicates an error code.
If the display indicates any error codes, note the code number, and then have a Yamaha dealer check the vehicle.

ECA11590

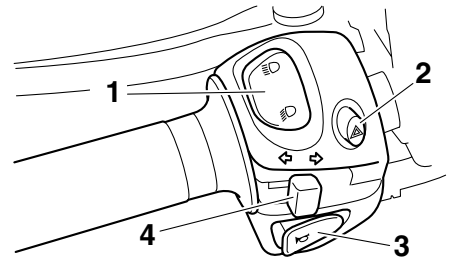
NOTICE

If the display indicates an error code, the vehicle should be checked as soon as possible in order to avoid engine damage.

EAU12348

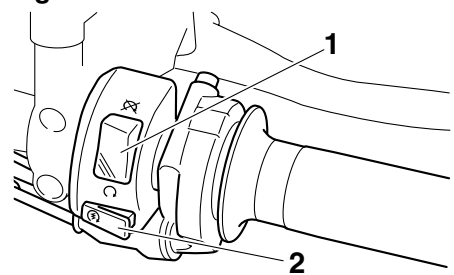
Handlebar switches

Left



1. Dimmer switch “ / ”
2. Hazard switch “ ”
3. Horn switch “ ”
4. Turn signal switch “ / ”

Right



1. Engine stop switch “ / ”
2. Start switch “ ”

EAU12400

Dimmer switch "≡D/≡D"

Set this switch to "≡D" for the high beam and to "≡D" for the low beam.

EAU12460

Turn signal switch "⇦/⇨"

To signal a right-hand turn, push this switch to "⇨". To signal a left-hand turn, push this switch to "⇦". When released, the switch returns to the center position. To cancel the turn signal lights, push the switch in after it has returned to the center position.

EAU12500

Horn switch "🔔"

Press this switch to sound the horn.

EAU12660

Engine stop switch "○/⊗"

Set this switch to "○" before starting the engine. Set this switch to "⊗" to stop the engine in case of an emergency, such as when the vehicle overturns or when the throttle cable is stuck.

EAU12711

Start switch "ⓢ"

Push this switch to crank the engine with the starter. See page 6-1 for starting instructions prior to starting the engine.

EAU42340

The engine trouble warning light and ABS warning light will come on when the key is turned to "ON" and the start switch is pushed, but this does not indicate a malfunction.

EAU12765

Hazard switch "⚠"

With the key in the "ON" position, use this switch to turn on the hazard lights (simultaneous flashing of all turn signal lights).

The hazard lights are used in case of an emergency or to warn other drivers when your vehicle is stopped where it might be a traffic hazard.

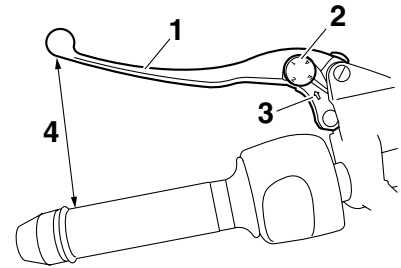
ECA10061

NOTICE

Do not use the hazard lights for an extended length of time with the engine not running, otherwise the battery may discharge.

EAU12830

Clutch lever



1. Clutch lever
2. Clutch lever position adjusting dial
3. Arrow mark
4. Distance between clutch lever and handlebar grip

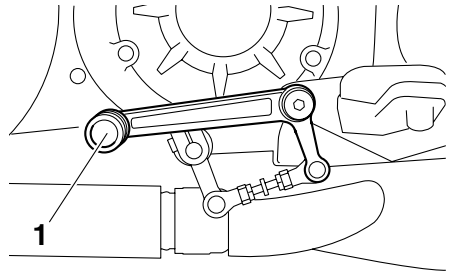
The clutch lever is located at the left handlebar grip. To disengage the clutch, pull the lever toward the handlebar grip. To engage the clutch, release the lever. The lever should be pulled rapidly and released slowly for smooth clutch operation.

The clutch lever is equipped with a clutch lever position adjusting dial. To adjust the distance between the clutch lever and the handlebar grip, turn the adjusting dial while holding the lever pushed away from the handlebar grip.

Make sure that the appropriate setting on the adjusting dial is aligned with the arrow mark on the clutch lever.
The clutch lever is equipped with a clutch switch, which is part of the ignition circuit cut-off system. (See page 4-28.)

EAU12871

Shift pedal

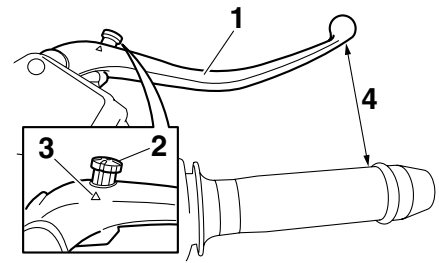


1. Shift pedal

The shift pedal is located on the left side of the motorcycle and is used in combination with the clutch lever when shifting the gears of the 5-speed constant-mesh transmission equipped on this motorcycle.

EAU33851

Brake lever



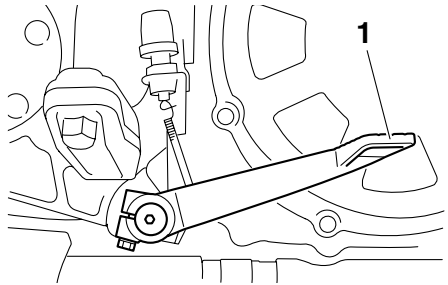
1. Brake lever
2. Brake lever position adjusting knob
3. "△" mark
4. Distance between brake lever and handlebar grip

The brake lever is located at the right handlebar grip. To apply the front brake, pull the lever toward the handlebar grip.
The brake lever is equipped with a brake lever position adjusting knob. To adjust the distance between the brake lever and the handlebar grip, turn the adjusting knob while holding the lever pushed away from the handlebar grip. When the desired position is obtained,

be sure to set it by aligning a groove on the adjusting knob with the "△" mark on the brake lever.

EAU12941

Brake pedal



1. Brake pedal

The brake pedal is on the right side of the motorcycle. To apply the rear brake, press down on the brake pedal.

EAU46392

ABS

The Yamaha ABS (Anti-lock Brake System) features a dual electronic control system, which acts on the front and rear brakes independently. The ABS is monitored by an ECU, which will have recourse to manual braking if a malfunction occurs.

EWA10090

⚠ WARNING

- **The ABS performs best on long braking distances.**
- **On certain (rough or gravel) roads, the braking distance may be longer with than without the ABS. Therefore, always keep a sufficient distance to the vehicle ahead to match the riding speed.**

TIP

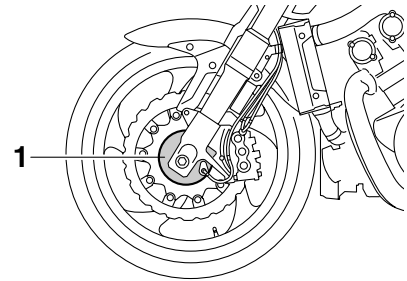
- When the ABS is activated, the brakes are operated in the usual way. A pulsating action may be felt at the brake lever or brake pedal, but this does not indicate a malfunction.

- This ABS has a test mode which allows the owner to experience the pulsating at the brake lever or brake pedal when the ABS is operating. However, special tools are required, so please consult your Yamaha dealer when performing this test.

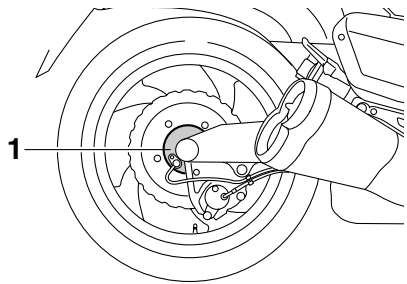
ECA16120

NOTICE

Keep any type of magnets (including magnetic pick-up tools, magnetic screwdrivers, etc.) away from the front and rear wheel hubs, otherwise the magnetic rotors equipped in the wheel hubs may be damaged, resulting in improper performance of the ABS system.



1. Front wheel hub



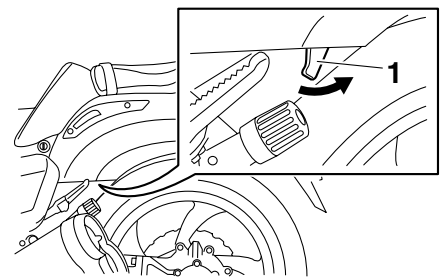
1. Rear wheel hub

EAU46850

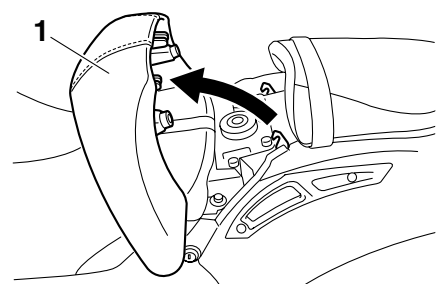
Fuel tank cap

To remove the fuel tank cap

1. Pull the rider seat backrest release lever on the left side of the vehicle as shown. The backrest will slide forward.

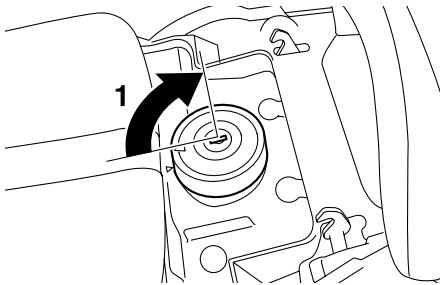


1. Rider seat backrest release lever



1. Rider seat backrest

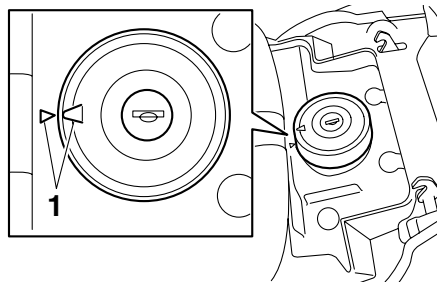
2. Insert the key into the lock, and then turn it 1/4 turn clockwise. The lock will be released and the fuel tank cap can be removed.



1. Unlock.

To install the fuel tank cap

1. Insert the fuel tank cap into the tank opening with the key inserted in the lock and with the mark on the cap aligned with the mark on the fuel tank.



1. Match marks

2. Turn the key counterclockwise to the original position, and then remove it.
3. Return the backrest to the original position.

TIP

The fuel tank cap cannot be installed unless the key is in the lock. In addition, the key cannot be removed if the cap is not properly installed and locked.

EWA10131

⚠ WARNING

Make sure that the fuel tank cap is properly installed before riding. Leaking fuel is a fire hazard.

EAU13212

Fuel

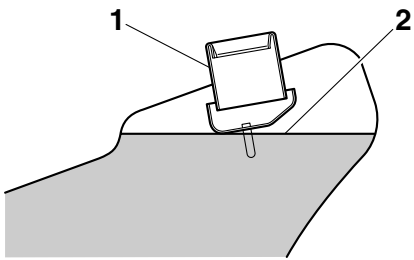
Make sure there is sufficient gasoline in the tank.

EWA10881

⚠ WARNING

Gasoline and gasoline vapors are extremely flammable. To avoid fires and explosions and to reduce the risk of injury when refueling, follow these instructions.

1. Before refueling, turn off the engine and be sure that no one is sitting on the vehicle. Never refuel while smoking, or while in the vicinity of sparks, open flames, or other sources of ignition such as the pilot lights of water heaters and clothes dryers.
2. Do not overfill the fuel tank. Stop filling when the fuel reaches the bottom of the filler tube. Because fuel expands when it heats up, heat from the engine or the sun can cause fuel to spill out of the fuel tank.



1. Fuel tank filler tube
2. Maximum fuel level

3. Wipe up any spilled fuel immediately. ***NOTICE:*** **Immediately wipe off spilled fuel with a clean, dry, soft cloth, since fuel may deteriorate painted surfaces or plastic parts.** [ECA10071]
4. Be sure to securely close the fuel tank cap.

EWA15151

⚠ WARNING

Gasoline is poisonous and can cause injury or death. Handle gasoline with care. Never siphon gasoline by mouth. If you should swallow some gasoline or inhale a lot of gasoline vapor, or get some gasoline in your eyes, see your doctor immediately. If gasoline spills on your skin, wash with soap and water. If gasoline spills on your clothing, change your clothes.

EAU13381

Recommended fuel:
PREMIUM UNLEADED GASOLINE ONLY
Fuel tank capacity:
15.0 L (3.96 US gal, 3.30 Imp.gal)
Fuel reserve amount (when the fuel level warning light comes on):
3.9 L (1.03 US gal, 0.86 Imp.gal)

ECA11400

NOTICE

Use only unleaded gasoline. The use of leaded gasoline will cause severe damage to internal engine parts, such as the valves and piston rings, as well as to the exhaust system.

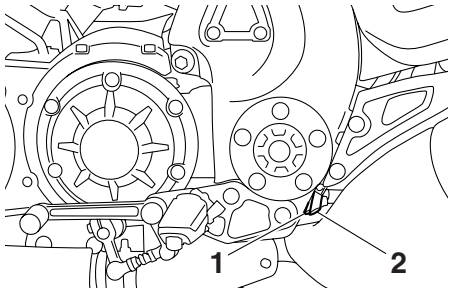
Your Yamaha engine has been designed to use premium unleaded gasoline with a pump octane number [(R+M)/2] of 91 or higher, or a research octane number of 95 or higher. If knocking (or pinging) occurs, use a gasoline of a different brand. Use of unleaded fuel will extend spark plug life and reduce maintenance costs.

Gasohol

There are two types of gasohol: gasohol containing ethanol and that containing methanol. Gasohol containing ethanol can be used if the ethanol content does not exceed 10% (E10). Gasohol containing methanol is not recommended by Yamaha because it can cause damage to the fuel system or vehicle performance problems.

EAU48760

Fuel tank breather/overflow hose



1. Fuel tank breather hose
2. Fuel tank overflow hose

TIP

For California: See page 7-12 for breather hose information.

Before operating the motorcycle:

- Check the fuel tank breather/overflow hose connection.
- Check the fuel tank breather/overflow hose for cracks or damage, and replace it if damaged.
- Make sure that the end of the fuel tank breather/overflow hose is not blocked, and clean it if necessary.

EAU13445

Catalytic converters

This vehicle is equipped with catalytic converters in the exhaust system.

EWA10862

⚠ WARNING

The exhaust system is hot after operation. To prevent a fire hazard or burns:

- **Do not park the vehicle near possible fire hazards such as grass or other materials that easily burn.**
- **Park the vehicle in a place where pedestrians or children are not likely to touch the hot exhaust system.**
- **Make sure that the exhaust system has cooled down before doing any maintenance work.**
- **Do not allow the engine to idle more than a few minutes. Long idling can cause a build-up of heat.**

ECA10701

NOTICE

Use only unleaded gasoline. The use of leaded gasoline will cause unrepairable damage to the catalytic converter.

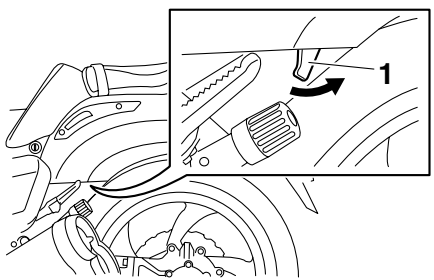
EAU46840

Seats

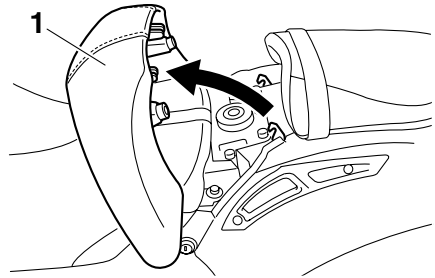
Rider seat

To remove the rider seat

1. Pull the rider seat backrest release lever on the left side of the vehicle as shown. The backrest will slide forward.

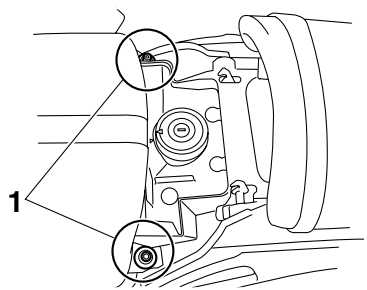


1. Rider seat backrest release lever



1. Rider seat backrest

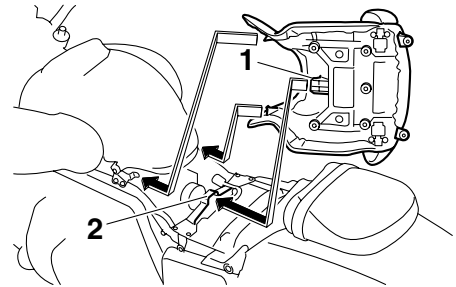
2. Remove the bolts, and then pull the rider seat off.



1. Bolt

To install the rider seat

1. Insert the projection on the front of the rider seat into the seat holder as shown.



1. Projection
2. Seat holder

2. Place the rider seat in the original position, and then tighten the bolts.

TIP

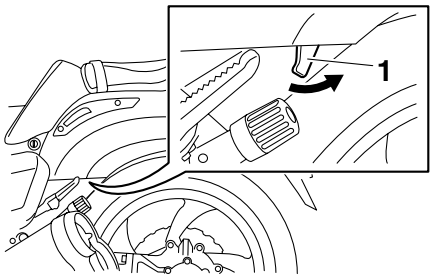
Make sure that the rider seat is properly secured before riding.

3. Return the backrest to the original position.

Passenger seat

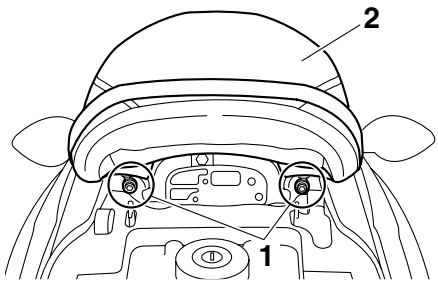
To remove the passenger seat

1. Pull the rider seat backrest release lever on the left side of the vehicle as shown. The backrest will slide forward.



1. Rider seat backrest release lever

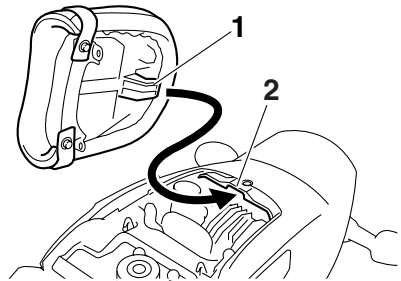
2. Remove the bolts, and then pull the passenger seat off.



1. Bolt
2. Passenger seat

To install the passenger seat

1. Insert the projection on the passenger seat into the holder as shown.



1. Projection
2. Seat holder

2. Place the passenger seat in the original position, and then install the bolts.
3. Return the backrest to the original position.

TIP

Make sure that the passenger seat is properly secured before riding.

EAU14733

Adjusting the front fork

EWA10180

⚠ WARNING

Always adjust both fork legs equally, otherwise poor handling and loss of stability may result.

This front fork is equipped with spring preload adjusting bolts, rebound damping force adjusting knobs and compression damping force adjusting screws.

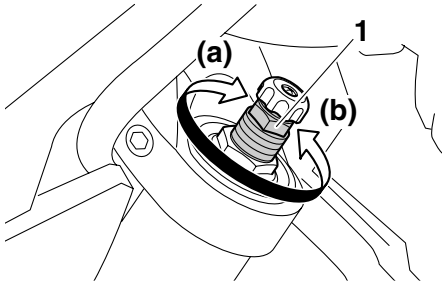
ECA10101

NOTICE

To avoid damaging the mechanism, do not attempt to turn beyond the maximum or minimum settings.

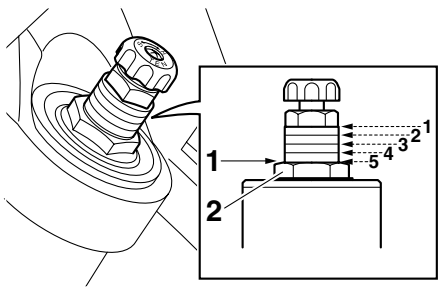
Spring preload

To increase the spring preload and thereby harden the suspension, turn the adjusting bolt on each fork leg in direction (a). To decrease the spring preload and thereby soften the suspension, turn the adjusting bolt on each fork leg in direction (b).



1. Spring preload adjusting bolt

Align the appropriate groove on the adjusting mechanism with the top of the front fork cap bolt.

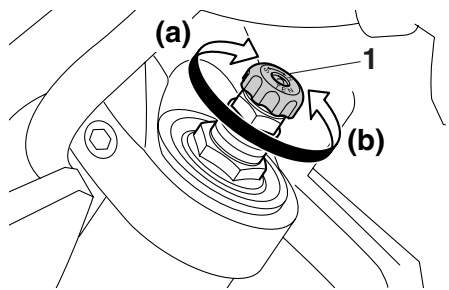


1. Current setting
2. Front fork cap bolt

Spring preload setting:
Minimum (soft):
5
Standard:
4
Maximum (hard):
1

Rebound damping force

To increase the rebound damping force and thereby harden the rebound damping, turn the adjusting knob on each fork leg in direction (a). To decrease the rebound damping force and thereby soften the rebound damping, turn the adjusting knob on each fork leg in direction (b).

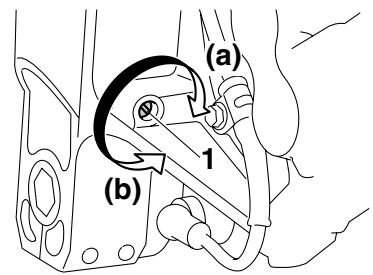


1. Rebound damping force adjusting knob

Rebound damping setting:
Minimum (soft):
17 click(s) in direction (b)*
Standard:
12 click(s) in direction (b)*
Maximum (hard):
1 click(s) in direction (b)*
* With the adjusting knob fully turned in direction (a)

Compression damping force

To increase the compression damping force and thereby harden the compression damping, turn the adjusting screw on each fork leg in direction (a). To decrease the compression damping force and thereby soften the compression damping, turn the adjusting screw on each fork leg in direction (b).



1. Compression damping force adjusting screw

4

Compression damping setting:
Minimum (soft):
20 click(s) in direction (b)*
Standard:
12 click(s) in direction (b)*
Maximum (hard):
1 click(s) in direction (b)*
* With the adjusting screw fully turned in direction (a)

TIP

Although the total number of clicks of a damping force adjusting mechanism may not exactly match the above specifications due to small differences in production, the actual number of clicks always represents the entire adjusting range. To obtain a precise adjustment, it would be advisable to check the number of clicks of each damping force adjusting mechanism and to modify the specifications as necessary.

EAU46493

Adjusting the shock absorber assembly

This shock absorber assembly is equipped with a spring preload adjusting knob and rebound and compression damping force adjusting knobs.

ECA10101

NOTICE

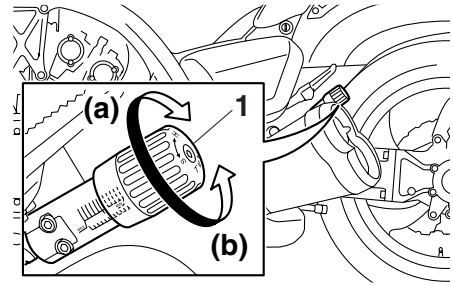
To avoid damaging the mechanism, do not attempt to turn beyond the maximum or minimum settings.

Spring preload

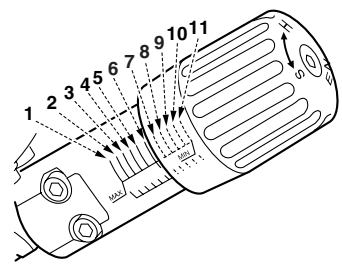
To increase the spring preload and thereby harden the suspension, turn the adjusting knob in direction (a). To decrease the spring preload and thereby soften the suspension, turn the adjusting knob in direction (b).

TIP

Align the appropriate mark on the adjusting mechanism with the end of the adjusting knob.

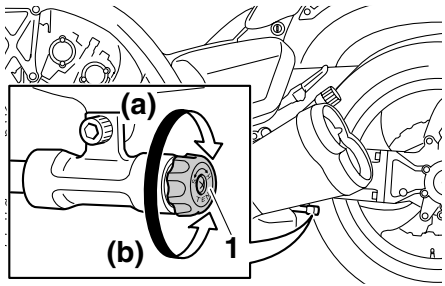


1. Spring preload adjusting knob



Spring preload setting:
Minimum (soft):
11
Standard:
6
Maximum (hard):
1

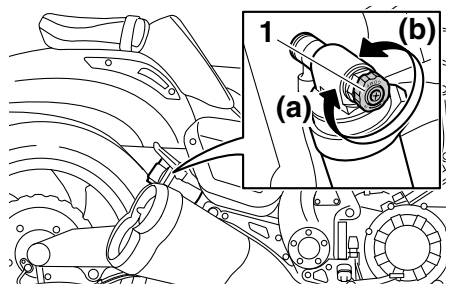
Rebound damping force
To increase the rebound damping force and thereby harden the rebound damping, turn the adjusting knob in direction (a). To decrease the rebound damping force and thereby soften the rebound damping, turn the adjusting knob in direction (b).



1. Rebound damping force adjusting knob

Rebound damping setting:
Minimum (soft):
20 clicks in direction (b)*
Standard:
12 clicks in direction (b)*
Maximum (hard):
3 clicks in direction (b)*
* With the adjusting knob fully turned in direction (a)

Compression damping force
To increase the compression damping force and thereby harden the compression damping, turn the adjusting knob in direction (a). To decrease the compression damping force and thereby soften the compression damping, turn the adjusting knob in direction (b).



1. Compression damping force adjusting knob

Compression damping setting:
Minimum (soft):
12 clicks in direction (b)*
Standard:
10 clicks in direction (b)*
Maximum (hard):
1 clicks in direction (b)*
* With the adjusting knob fully turned in direction (a)

TIP
To obtain a precise adjustment, it is advisable to check the actual total number of clicks or turns of each damping force adjusting mechanism. This adjustment range may not exactly match the specifications listed due to small differences in production.

EWA10221

⚠ WARNING

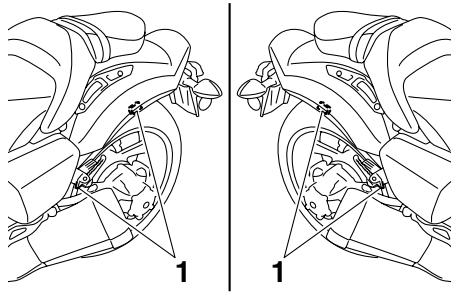
This shock absorber assembly contains highly pressurized nitrogen gas. Read and understand the following information before handling the shock absorber assembly.

- **Do not tamper with or attempt to open the cylinder assembly.**
- **Do not subject the shock absorber assembly to an open flame or other high heat source. This may cause the unit to explode due to excessive gas pressure.**
- **Do not deform or damage the cylinder in any way. Cylinder damage will result in poor damping performance.**

- **Do not dispose of a damaged or worn-out shock absorber assembly yourself. Take the shock absorber assembly to a Yamaha dealer for any service.**

EAU48730

Luggage strap holders



1. Luggage strap holder

There are four luggage strap holders: one on each passenger footrest and two on the inside of the rear fender.

EAU41941

EXUP system

This model is equipped with Yamaha's EXUP (EXhaust Ultimate Power valve) system. This system boosts engine power by means of a valve that regulates the inner diameter of the exhaust pipe. The EXUP system valve is constantly adjusted in accordance with the engine speed by a computer-controlled servomotor.

ECA15610

NOTICE

The EXUP system has been set and extensively tested at the Yamaha factory. Changing these settings without sufficient technical knowledge may result in poor performance of or damage to the engine.

EAU15304

Sidestand

The sidestand is located on the left side of the frame. Raise the sidestand or lower it with your foot while holding the vehicle upright.

TIP

The built-in sidestand switch is part of the ignition circuit cut-off system, which cuts the ignition in certain situations. (See page 4-28 for an explanation of the ignition circuit cut-off system.)

EWA10241

⚠ WARNING

The vehicle must not be ridden with the sidestand down, or if the sidestand cannot be properly moved up (or does not stay up), otherwise the sidestand could contact the ground and distract the operator, resulting in a possible loss of control. Yamaha's ignition circuit cut-off system has been designed to assist the operator in fulfilling the responsibility of raising the sidestand before starting off. Therefore, check this system regularly and have a Yamaha dealer repair it if it does not function properly.

EAU44892

Ignition circuit cut-off system

The ignition circuit cut-off system (comprising the sidestand switch, clutch switch and neutral switch) has the following functions.

- It prevents starting when the transmission is in gear and the sidestand is up, but the clutch lever is not pulled.
- It prevents starting when the transmission is in gear and the clutch lever is pulled, but the sidestand is still down.
- It cuts the running engine when the transmission is in gear and the sidestand is moved down.

Periodically check the operation of the ignition circuit cut-off system according to the following procedure.

With the engine turned off:
1. Move the sidestand down.
2. Make sure that the engine stop switch is set to "◯".
3. Turn the key on.
4. Shift the transmission into the neutral position.
5. Push the start switch.

Does the engine start?

YES **NO** → The neutral switch may not be working correctly. **The motorcycle should not be ridden** until checked by a Yamaha dealer.

With the engine still running:
6. Move the sidestand up.
7. Keep the clutch lever pulled.
8. Shift the transmission into gear.
9. Move the sidestand down.

Does the engine stall?

YES **NO** → The sidestand switch may not be working correctly. **The motorcycle should not be ridden** until checked by a Yamaha dealer.

After the engine has stalled:
10. Move the sidestand up.
11. Keep the clutch lever pulled.
12. Push the start switch.

Does the engine start?

YES **NO** → The clutch switch may not be working correctly. **The motorcycle should not be ridden** until checked by a Yamaha dealer.

The system is OK. **The motorcycle can be ridden.**

⚠ WARNING

If a malfunction is noted, have a Yamaha dealer check the system before riding.

EAU15596

Inspect your vehicle each time you use it to make sure the vehicle is in safe operating condition. Always follow the inspection and maintenance procedures and schedules described in the Owner's Manual.

EWA11151

⚠ WARNING

Failure to inspect or maintain the vehicle properly increases the possibility of an accident or equipment damage. Do not operate the vehicle if you find any problem. If a problem cannot be corrected by the procedures provided in this manual, have the vehicle inspected by a Yamaha dealer.

Before using this vehicle, check the following points:

ITEM	CHECKS	PAGE
Fuel	• Check fuel level in fuel tank. • Refuel if necessary. • Check fuel line for leakage. • Check fuel tank breather/overflow hose for obstructions, cracks or damage, and check hose connection.	4-19, 4-21
Engine oil	• Check oil level in engine. • If necessary, add recommended oil to specified level. • Check vehicle for oil leakage.	7-12
Final gear oil	• Check vehicle for oil leakage.	7-15
Coolant	• Check coolant level in reservoir. • If necessary, add recommended coolant to specified level. • Check cooling system for leakage.	7-18
Front brake	• Check operation. • If soft or spongy, have Yamaha dealer bleed hydraulic system. • Check brake pads for wear. • Replace if necessary. • Check fluid level in reservoir. • If necessary, add recommended brake fluid to specified level. • Check hydraulic system for leakage.	7-26, 7-26

FOR YOUR SAFETY – PRE-OPERATION CHECKS

ITEM	CHECKS	PAGE
Rear brake	• Check operation. • If soft or spongy, have Yamaha dealer bleed hydraulic system. • Check brake pads for wear. • Replace if necessary. • Check fluid level in reservoir. • If necessary, add recommended brake fluid to specified level. • Check hydraulic system for leakage.	7-26, 7-26
Clutch	• Check operation. • If soft or spongy, have Yamaha dealer bleed hydraulic system. • Check hydraulic system for leakage.	7-24
Throttle grip	• Make sure that operation is smooth. • Check throttle grip free play. • If necessary, have Yamaha dealer adjust throttle grip free play and lubricate cable and grip housing.	7-21, 7-28
Control cables	• Make sure that operation is smooth. • Lubricate if necessary.	7-28
Wheels and tires	• Check for damage. • Check tire condition and tread depth. • Check air pressure. • Correct if necessary.	7-22, 7-24
Brake and shift pedals	• Make sure that operation is smooth. • Lubricate pedal pivoting points if necessary.	7-28
Brake and clutch levers	• Make sure that operation is smooth. • Lubricate lever pivoting points if necessary.	7-29
Sidestand	• Make sure that operation is smooth. • Lubricate pivot if necessary.	7-30
Chassis fasteners	• Make sure that all nuts, bolts and screws are properly tightened. • Tighten if necessary.	—
Instruments, lights, signals and switches	• Check operation. • Correct if necessary.	—

ITEM	CHECKS	PAGE
Sidestand switch	• Check operation of ignition circuit cut-off system. • If system is not working correctly, have Yamaha dealer check vehicle.	4-28

EAU15951

Read the Owner's Manual carefully to become familiar with all controls. If there is a control or function you do not understand, ask your Yamaha dealer.

EWA10271

⚠ WARNING

Failure to familiarize yourself with the controls can lead to loss of control, which could cause an accident or injury.

EAU48710

TIP

This model is equipped with:

- a lean angle sensor to stop the engine in case of a turnover. In this case, the multi-function display indicates error code 30, but this is not a malfunction. Turn the key to "OFF" and then to "ON" to clear the error code. Failing to do so will prevent the engine from starting even though the engine will crank when pushing the start switch.
- an engine auto-stop system. The engine stops automatically if left idling for 20 minutes. If the engine stops, simply push the start switch to restart the engine.

EAU46515

Starting the engine

In order for the ignition circuit cut-off system to enable starting, one of the following conditions must be met:

- The transmission is in the neutral position.
- The transmission is in gear with the clutch lever pulled and the sidestand up.

See page 4-28 for more information.

1. Turn the key to "ON" and make sure that the engine stop switch is set to "○".
   The following warning lights and indicator light should come on for a few seconds, then go off.
   - Oil level warning light
   - Fuel level warning light
   - Coolant temperature warning light
   - Engine trouble warning light
   - ABS warning light
   - Shift timing indicator light

ECA11833

NOTICE

If a warning or indicator light does not come on initially when the key is turned to "ON", or if a warning or indicator light remains on, see page 4-2 for the corresponding warning and indicator light circuit check.

2. Shift the transmission into the neutral position. The neutral indicator light should come on. If not, ask a Yamaha dealer to check the electrical circuit.
3. Start the engine by pushing the start switch.
   If the engine fails to start, release the start switch, wait a few seconds, and then try again. Each starting attempt should be as short as possible to preserve the battery. Do not crank the engine more than 10 seconds on any one attempt.

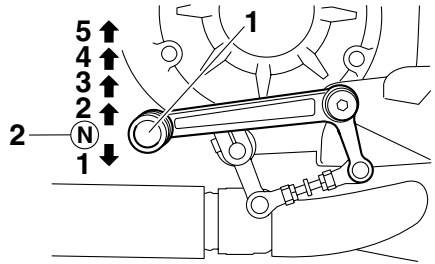
ECA11042

NOTICE

For maximum engine life, never accelerate hard when the engine is cold!

EAU16671

Shifting



1. Shift pedal
2. Neutral position

Shifting gears lets you control the amount of engine power available for starting off, accelerating, climbing hills, etc.
The gear positions are shown in the illustration.

TIP

To shift the transmission into the neutral position, press the shift pedal down repeatedly until it reaches the end of its travel, and then slightly raise it.

ECA10260

NOTICE

- **Even with the transmission in the neutral position, do not coast for long periods of time with the engine off, and do not tow the motorcycle for long distances. The transmission is properly lubricated only when the engine is running. Inadequate lubrication may damage the transmission.**
- **Always use the clutch while changing gears to avoid damaging the engine, transmission, and drive train, which are not designed to withstand the shock of forced shifting.**

EAU16681

To start out and accelerate

1. Pull the clutch lever to disengage the clutch.
2. Shift the transmission into first gear. The neutral indicator light should go out.
3. Open the throttle gradually, and at the same time, release the clutch lever slowly.

4. At the recommended shift points shown in the following table, close the throttle, and at the same time, quickly pull the clutch lever in.
5. Shift the transmission into second gear. (Make sure not to shift the transmission into the neutral position.)
6. Open the throttle part way and gradually release the clutch lever.
7. Follow the same procedure when shifting to the next higher gear.

TIP

When shifting gears in normal operating conditions, use the recommended shift points.

EAU16700

To decelerate

1. Apply both the front and the rear brakes to slow the motorcycle.
2. Shift the transmission into first gear when the motorcycle reaches 25 km/h (16 mi/h). If the engine is about to stall or runs very roughly, pull the clutch lever in and use the brakes to stop the motorcycle.
3. Shift the transmission into the neutral position when the motorcycle is almost completely stopped. The neutral indicator light should come on.

EAU16720

Recommended shift points

The recommended shift points during acceleration and deceleration are shown in the table below.

Shift up points:	
1st → 2nd:	20 km/h (12 mi/h)
2nd → 3rd:	30 km/h (19 mi/h)
3rd → 4th:	40 km/h (25 mi/h)
4th → 5th:	50 km/h (31 mi/h)
Shift down points:	
5th → 4th:	25 km/h (16 mi/h)
4th → 3rd:	25 km/h (16 mi/h)
3rd → 2nd:	25 km/h (16 mi/h)
2nd → 1st:	25 km/h (16 mi/h)

EAU16841

Engine break-in

There is never a more important period in the life of your engine than the period between 0 and 1600 km (1000 mi). For this reason, you should read the following material carefully.

Since the engine is brand new, do not put an excessive load on it for the first 1600 km (1000 mi). The various parts in the engine wear and polish themselves to the correct operating clearances. During this period, prolonged full-throttle operation or any condition that might result in engine overheating must be avoided.

EAU17123

0–1000 km (0–600 mi)

Avoid prolonged operation above 4800 r/min. ***NOTICE:*** **After 1000 km (600 mi) of operation, the engine oil and final gear oil must be changed, and the oil filter cartridge or element replaced.** [ECA10332]

1000–1600 km (600–1000 mi)
Avoid prolonged operation above 5700 r/min.

1600 km (1000 mi) and beyond
The vehicle can now be operated normally.

ECA10310

NOTICE

- **Keep the engine speed out of the tachometer red zone.**
- **If any engine trouble should occur during the engine break-in period, immediately have a Yamaha dealer check the vehicle.**

EAU17213

Parking

When parking, stop the engine, and then remove the key from the main switch.

EWA10311

⚠ WARNING

- **Since the engine and exhaust system can become very hot, park in a place where pedestrians or children are not likely to touch them and be burned.**
- **Do not park on a slope or on soft ground, otherwise the vehicle may overturn, increasing the risk of a fuel leak and fire.**
- **Do not park near grass or other flammable materials which might catch fire.**

PERIODIC MAINTENANCE AND ADJUSTMENT

EAU17243

Periodic inspection, adjustment, and lubrication will keep your vehicle in the safest and most efficient condition possible. Safety is an obligation of the vehicle owner/operator. The most important points of vehicle inspection, adjustment, and lubrication are explained on the following pages.

The intervals given in the periodic maintenance charts should be simply considered as a general guide under normal riding conditions. However, depending on the weather, terrain, geographical location, and individual use, the maintenance intervals may need to be shortened.

EWA10321

⚠ WARNING

Failure to properly maintain the vehicle or performing maintenance activities incorrectly may increase your risk of injury or death during service or while using the vehicle. If you are not familiar with vehicle service, have a Yamaha dealer perform service.

EWA15121

⚠ WARNING

Turn off the engine when performing maintenance unless otherwise specified.

- **A running engine has moving parts that can catch on body parts or clothing and electrical parts that can cause shocks or fires.**
- **Running the engine while servicing can lead to eye injury, burns, fire, or carbon monoxide poisoning – possibly leading to death. See page 2-1 for more information about carbon monoxide.**

EWA15460

⚠ WARNING

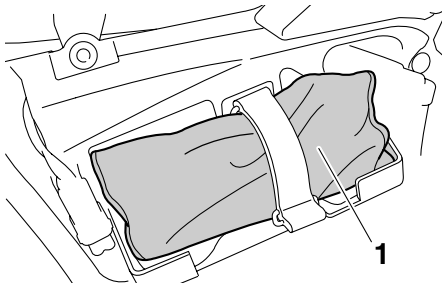
Brake discs, calipers, drums, and linings can become very hot during use. To avoid possible burns, let brake components cool before touching them.

EAU17302

Emission controls not only function to ensure cleaner air, but are also vital to proper engine operation and maximum performance. In the following periodic maintenance charts, the services related to emissions control are grouped separately. These services require specialized data, knowledge, and equipment. Maintenance, replacement, or repair of the emission control devices and systems may be performed by any repair establishment or individual that is certified (if applicable). Yamaha dealers are trained and equipped to perform these particular services.

EAU17341

Owner's tool kit



1. Owner's tool kit

The owner's tool kit is located behind panel A. (See page 7-9.)
The service information included in this manual and the tools provided in the owner's tool kit are intended to assist you in the performance of preventive maintenance and minor repairs. However, additional tools such as a torque wrench may be necessary to perform certain maintenance work correctly.

TIP

If you do not have the tools or experience required for a particular job, have a Yamaha dealer perform it for you.

EAU48490

TIP

- From 24000 mi (37000 km) or 36 months, repeat the maintenance intervals starting from 8000 mi (13000 km) or 12 months.
- Items marked with an asterisk require special tools, data and technical skills, have a Yamaha dealer perform the service.

EAU17601

Periodic maintenance chart for the emission control system

No.		ITEM	ROUTINE	INITIAL	ODOMETER READINGS				
				600 mi (1000 km) or 1 month	4000 mi (7000 km) or 6 months	8000 mi (13000 km) or 12 months	12000 mi (19000 km) or 18 months	16000 mi (25000 km) or 24 months	20000 mi (31000 km) or 30 months
1	*	**Fuel line**	• Check fuel hoses for cracks or damage. • Replace if necessary.		√	√	√	√	√
2	*	**Spark plugs**	• Check condition. • Clean. • Replace every 12000 mi (19000 km) or 18 months.		√		Replace.		√
3	*	**Valve clearance**	• Check and adjust valve clearance when engine is cold.	Every 26600 mi (42000 km)					
4	*	**Crankcase breather system**	• Check breather hose for cracks or damage. • Replace if necessary.		√	√	√	√	√
5	*	**Fuel injection**	• Adjust synchronization.		√	√	√	√	√
6	*	**Exhaust system**	• Check for leakage. • Tighten if necessary. • Replace gasket(s) if necessary.		√	√	√	√	√

No.		ITEM	ROUTINE	INITIAL	ODOMETER READINGS				
				600 mi (1000 km) or 1 month	4000 mi (7000 km) or 6 months	8000 mi (13000 km) or 12 months	12000 mi (19000 km) or 18 months	16000 mi (25000 km) or 24 months	20000 mi (31000 km) or 30 months
7	*	**Evaporative emission control system (for California only)**	• Check control system for damage. • Replace if necessary.				√		√
8	*	**Air induction system**	• Check the air cut-off valve, reed valve, and hose for damage. • Replace any damaged parts.			√		√	

EAU32186

General maintenance and lubrication chart

No.		ITEM	ROUTINE	INITIAL	ODOMETER READINGS				
				600 mi (1000 km) or 1 month	4000 mi (7000 km) or 6 months	8000 mi (13000 km) or 12 months	12000 mi (19000 km) or 18 months	16000 mi (25000 km) or 24 months	20000 mi (31000 km) or 30 months
1	*	**Air filter element**	• Replace.	Every 24000 mi (37000 km)					
2	*	**Clutch**	• Check operation and fluid leakage. • Correct if necessary.	√	√	√	√	√	√
3	*	**Front brake**	• Check operation, fluid level, and for fluid leakage. • Replace brake pads if necessary.	√	√	√	√	√	√
4	*	**Rear brake**	• Check operation, fluid level, and for fluid leakage. • Replace brake pads if necessary.	√	√	√	√	√	√
5	*	**Brake hoses**	• Check for cracks or damage.		√	√	√	√	√
			• Replace.	Every 4 years					
6	*	**Wheels**	• Check runout and for damage. • Replace if necessary.		√	√	√	√	√
7	*	**Tires**	• Check tread depth and for damage. • Replace if necessary. • Check air pressure. • Correct if necessary.		√	√	√	√	√
8	*	**Wheel bearings**	• Check bearings for smooth operation. • Replace if necessary.		√	√	√	√	√

No.		ITEM	ROUTINE	INITIAL	ODOMETER READINGS				
				600 mi (1000 km) or 1 month	4000 mi (7000 km) or 6 months	8000 mi (13000 km) or 12 months	12000 mi (19000 km) or 18 months	16000 mi (25000 km) or 24 months	20000 mi (31000 km) or 30 months
9	*	**Swingarm pivot bearings**	• Check bearing assemblies for looseness. • Moderately repack with lithium-soap-based grease.			√		Repack.	
10	*	**Steering bearings**	• Check bearing assemblies for looseness. • Moderately repack with lithium-soap-based grease every 16000 mi (25000 km) or 24 months.	√	√	√	√	Repack.	√
11	*	**Chassis fasteners**	• Check all chassis fitting and fasteners. • Correct if necessary.		√	√	√	√	√
12		**Brake lever pivot shaft**	• Apply silicone grease lightly.		√	√	√	√	√
13		**Brake pedal pivot shaft**	• Apply lithium-soap-based grease lightly.		√	√	√	√	√
14		**Clutch lever pivot shaft**	• Apply silicone grease lightly.		√	√	√	√	√
15		**Shift pedal pivot shaft**	• Apply lithium-soap-based grease lightly.		√	√	√	√	√
16		**Sidestand pivot**	• Check operation. • Apply lithium-soap-based grease lightly.		√	√	√	√	√
17	*	**Sidestand switch**	• Check operation and replace if necessary.	√	√	√	√	√	√

No.		ITEM	ROUTINE	INITIAL	ODOMETER READINGS				
				600 mi (1000 km) or 1 month	4000 mi (7000 km) or 6 months	8000 mi (13000 km) or 12 months	12000 mi (19000 km) or 18 months	16000 mi (25000 km) or 24 months	20000 mi (31000 km) or 30 months
18	*	**Front fork**	• Check operation and for oil leakage. • Replace if necessary.		√	√	√	√	√
19	*	**Shock absorber assembly**	• Check operation and for oil leakage. • Replace if necessary.		√	√	√	√	√
20	*	**Rear suspension link pivots**	• Check operation. • Correct if necessary.			√		√	
21		**Engine oil**	• Change (warm engine before draining).	√	√	√	√	√	√
22	*	**Engine oil filter cartridge**	• Replace.	√		√		√	
23	*	**Cooling system**	• Check hoses for cracks or damage. • Replace if necessary.		√	√	√	√	√
			• Change with ethylene glycol antifreeze coolant every 24 months.					Change.	
24	*	**EXUP system**	• Check operation, cable free play and pulley position.	√	Every 12000 mi (19000 km)				
25		**Final gear oil**	• Check oil level and for oil leakage. • Change at initial 600 mi (1000 km) or 1 month, and thereafter every 16000 mi (25000 km) or 24 months.	Change.	√	√	√	Change.	√
26	*	**Front and rear brake switches**	• Check operation.	√	√	√	√	√	√

No.		ITEM	ROUTINE	INITIAL	ODOMETER READINGS				
				600 mi (1000 km) or 1 month	4000 mi (7000 km) or 6 months	8000 mi (13000 km) or 12 months	12000 mi (19000 km) or 18 months	16000 mi (25000 km) or 24 months	20000 mi (31000 km) or 30 months
27	*	**Control cables**	• Apply Yamaha chain and cable lube or engine oil thoroughly.	√	√	√	√	√	√
28	*	**Throttle grip**	• Check operation. • Check throttle grip free play, and adjust if necessary. • Lubricate cable and grip housing.		√	√	√	√	√
29	*	**Lights, signals and switches**	• Check operation. • Adjust headlight beam.	√	√	√	√	√	√

EAU38440

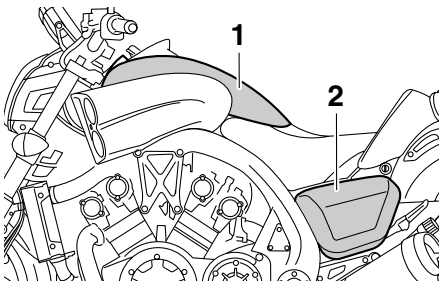
TIP

- Air filter
  - This model's air filter is equipped with a disposable oil-coated paper element, which must not be cleaned with compressed air to avoid damaging it.
  - The air filter element needs to be replaced more frequently when riding in unusually wet or dusty areas.
- Hydraulic brake and clutch systems
  - After disassembling the brake or clutch master cylinders, caliper cylinders or clutch release cylinder, always change the fluid. Regularly check the brake and clutch fluid levels and fill the reservoirs as required.
  - Replace the oil seals on the inner parts of the brake or clutch master cylinders, caliper cylinders and clutch release cylinder every two years.
  - Replace the brake and clutch hoses every four years or if cracked or damaged.

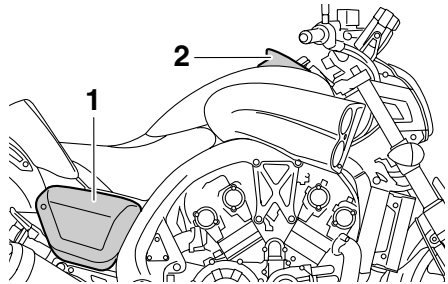
EAU18722

Removing and installing the cowling and panels

The cowling and panels shown need to be removed to perform some of the maintenance jobs described in this chapter. Refer to this section each time the cowling or a panel needs to be removed and installed.



1. Cowling A
2. Panel A



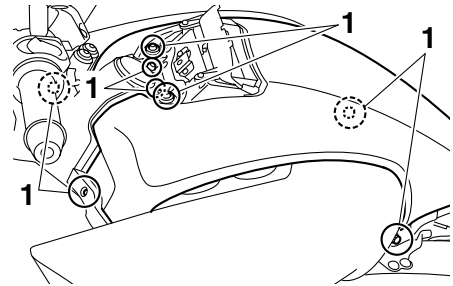
1. Panel B
2. Panel C

EAU46430

Cowling A

To remove the cowling

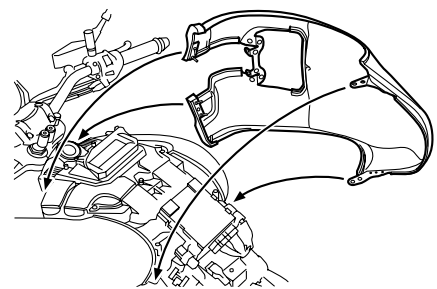
1. Remove the rider seat. (See page 4-22.)
2. Remove panel C. (See page 7-10.)
3. Remove the bolts, and then pull the cowling off.



1. Bolt

To install the cowling

1. Place the cowling in the original position, and then install the bolts.



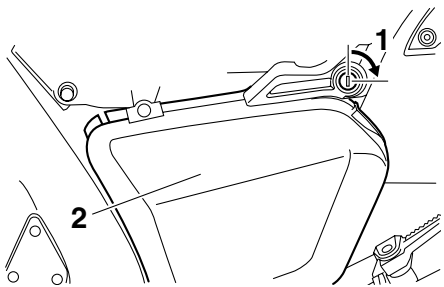
2. Install the panel.
3. Install the rider seat.

EAU46471

Panel A

To remove the panel

1. Insert the key into the lock, and then turn it 1/4 turn clockwise.

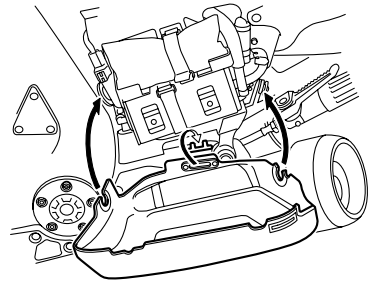


1. Unlock.
2. Panel A

2. Pull the panel outward.

To install the panel

1. Place the panel in the original position.

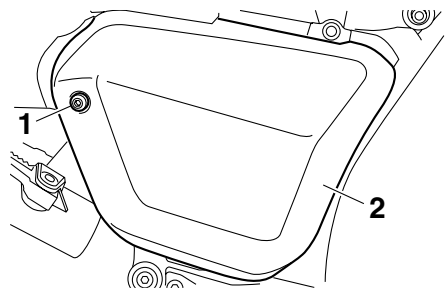


2. Turn the key counterclockwise to the original position, and then remove it.

Panel B

To remove the panel

1. Remove the bolt.

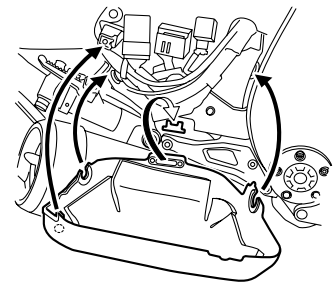


1. Bolt
2. Panel B

2. Pull the panel outward.

To install the panel

Place the panel in the original position, and then install the bolt.

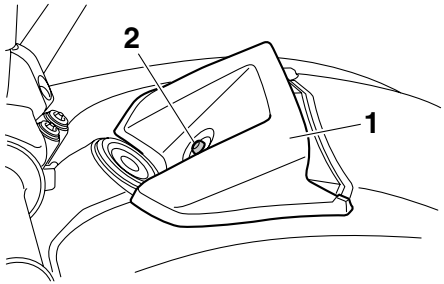


Panel C

To remove the panel

1. Remove the bolt.
2. Pull the panel upward.

7



1. Panel C
2. Bolt

To install the panel
Place the panel in the original position, and then install the bolt.

EAU46680

Checking the spark plugs

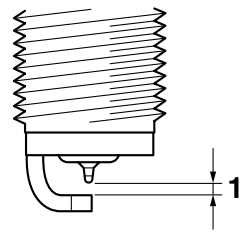
The spark plugs are important engine components, which should be checked periodically, preferably by a Yamaha dealer. Since heat and deposits will cause any spark plug to slowly erode, they should be removed and checked in accordance with the periodic maintenance and lubrication chart. In addition, the condition of the spark plugs can reveal the condition of the engine.

The porcelain insulator around the center electrode of each spark plug should be a medium-to-light tan (the ideal color when the vehicle is ridden normally), and all spark plugs installed in the engine should have the same color. If any spark plug shows a distinctly different color, the engine could be operating improperly. Do not attempt to diagnose such problems yourself. Instead, have a Yamaha dealer check the vehicle.

If a spark plug shows signs of electrode erosion and excessive carbon or other deposits, it should be replaced.

Specified spark plug:
NGK/CR9EIA
DENSO/IU27D

Before installing a spark plug, the spark plug gap should be measured with a wire thickness gauge and replaced if out of specification.



1. Spark plug gap

Spark plug gap:
0.8–0.9 mm (0.031–0.035 in)

Clean the surface of the spark plug gasket and its mating surface, and then wipe off any grime from the spark plug threads.

Tightening torque:
Spark plug:
13 Nm (1.3 m·kgf, 9.4 ft·lbf)

TIP

If a torque wrench is not available when installing a spark plug, a good estimate of the correct torque is 1/4–1/2 turn past finger tight. However, the spark plug should be tightened to the specified torque as soon as possible.

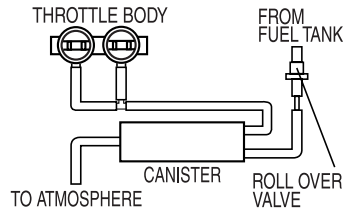
ECA10840

NOTICE

Do not use any tools to remove or install the spark plug cap, otherwise the ignition coil coupler may get damaged. The spark plug cap may be difficult to remove because the rubber seal on the end of the cap fits tightly. To remove the spark plug cap, simply twist it back and forth while pulling it out; to install it, twist it back and forth while pushing it in.

EAU19681

Canister (for California only)



This model is equipped with a canister to prevent the discharging of fuel vapor into the atmosphere. Before operating this vehicle, make sure to check the following:

- Check each hose connection.
- Check each hose and canister for cracks or damage. Replace if damaged.
- Make sure that the canister breather is not blocked, and if necessary, clean it.

EAU19908

Engine oil and oil filter cartridge

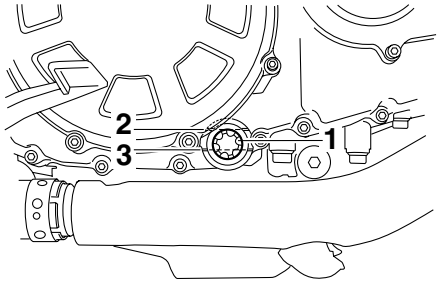
The engine oil level should be checked before each ride. In addition, the oil must be changed and the oil filter cartridge replaced at the intervals specified in the periodic maintenance and lubrication chart.

To check the engine oil level

1. Place the vehicle on a level surface and hold it in an upright position. A slight tilt to the side can result in a false reading.
2. Start the engine, warm it up for several minutes, and then turn it off.
3. Wait a few minutes until the oil settles, and then check the oil level through the check window located at the bottom-right side of the crankcase.

TIP

The engine oil should be between the minimum and maximum level marks.

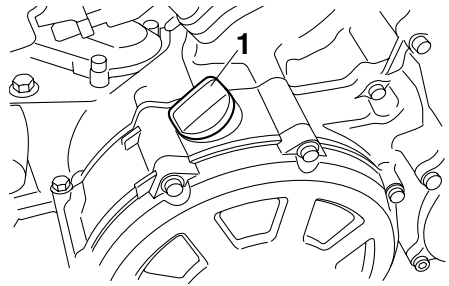


1. Engine oil level check window
2. Maximum level mark
3. Minimum level mark

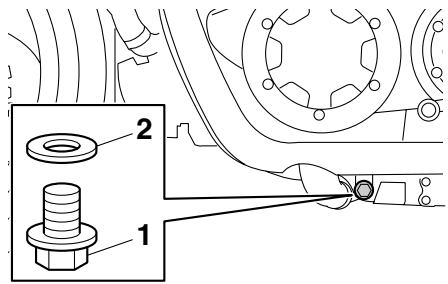
4. If the engine oil is below the minimum level mark, add sufficient oil of the recommended type to raise it to the correct level.

To change the engine oil (with or without oil filter cartridge replacement)

1. Place the vehicle on a level surface.
2. Start the engine, warm it up for several minutes, and then turn it off.
3. Place an oil pan under the engine to collect the used oil.
4. Remove the engine oil filler cap, the engine oil drain bolt and its gasket to drain the oil from the crankcase.



1. Engine oil filler cap

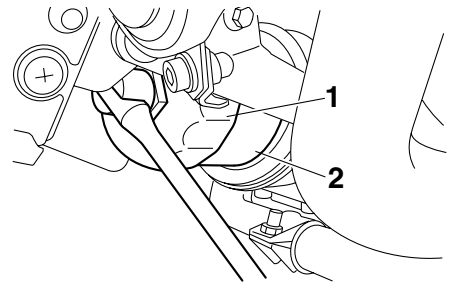


1. Engine oil drain bolt
2. Gasket

TIP

Skip steps 5–7 if the oil filter cartridge is not being replaced.

5. Remove the oil filter cartridge with an oil filter wrench.

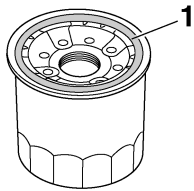


1. Oil filter wrench
2. Oil filter cartridge

TIP

An oil filter wrench is available at a Yamaha dealer.

6. Apply a thin coat of clean engine oil to the O-ring of the new oil filter cartridge.

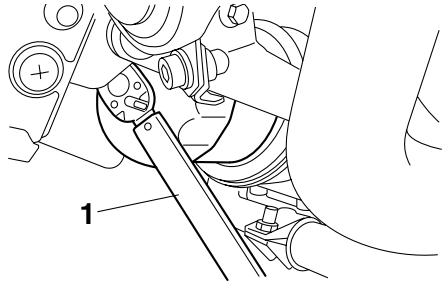


1. O-ring

TIP

Make sure that the O-ring is properly seated.

7. Install the new oil filter cartridge with an oil filter wrench, and then tighten it to the specified torque with a torque wrench.



1. Torque wrench

Tightening torque:
Oil filter cartridge:
17 Nm (1.7 m·kgf, 12 ft·lbf)

8. Install the engine oil drain bolt and its new gasket, and then tighten the bolt to the specified torque.

Tightening torque:
Engine oil drain bolt:
43 Nm (4.3 m·kgf, 31 ft·lbf)

9. Refill with the specified amount of the recommended engine oil, and then install and tighten the oil filler cap.

Recommended engine oil:
See page 9-1.
Oil quantity:
Without oil filter cartridge replacement:
4.30 L (4.55 US qt, 3.78 Imp.qt)
With oil filter cartridge replacement:
4.70 L (4.97 US qt, 4.14 Imp.qt)

TIP

Be sure to wipe off spilled oil on any parts after the engine and exhaust system have cooled down.

ECA11620

NOTICE

- **In order to prevent clutch slippage (since the engine oil also lubricates the clutch), do not mix any chemical additives. Do not use oils with a diesel specification of "CD" or oils of a higher quality than specified. In addition, do not use oils labeled "ENERGY CONSERVING II" or higher.**
- **Make sure that no foreign material enters the crankcase.**

10. Start the engine, and then let it idle for several minutes while checking it for oil leakage. If oil is leaking, immediately turn the engine off and check for the cause.

TIP

After the engine is started, the engine oil level warning light should go off if the oil level is sufficient.

ECA10401

NOTICE

If the oil level warning light flickers or remains on even if the oil level is correct, immediately turn the engine off and have a Yamaha dealer check the vehicle.

11. Turn the engine off, wait a few minutes until the oil settles, and then check the oil level and correct it if necessary.

EAU46577

Final gear oil

The final gear case must be checked for oil leakage before each ride. If any leakage is found, have a Yamaha dealer check and repair the vehicle. In addition, the final gear oil must be checked and changed as follows at the intervals specified in the periodic maintenance and lubrication chart.

EWA10370

⚠ WARNING

- **Make sure that no foreign material enters the final gear case.**
- **Make sure that no oil gets on the tire or wheel.**

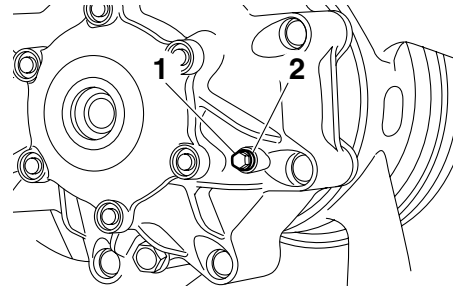
To check the final gear oil level

1. Place the vehicle on a level surface and hold it in an upright position.

TIP

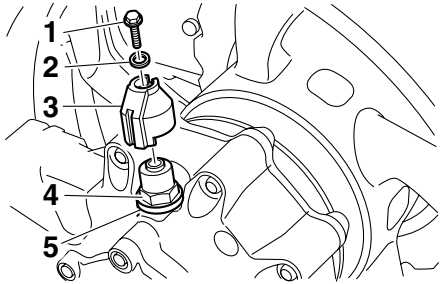
Make sure that the vehicle is positioned straight up when checking the oil level.

2. Remove the final gear oil check bolt and its gasket, and check that oil flows out.



1. Final gear oil check bolt
2. Gasket

3. If no oil flows out, remove the final gear case breather cap by removing the bolt and washer and then remove the final gear oil filler bolt and its gasket.



1. Final gear case breather cap bolt
2. Washer
3. Final gear case breather cap
4. Final gear oil filler bolt
5. Gasket

4. Check the gaskets for damage, and replace them if necessary.
5. Pour the recommended type of oil in the final gear oil filler hole until it flows out of the oil check bolt hole.
6. Install the oil check bolt, the oil filler bolt and their gasket, and then tighten the bolts to the specified torques.

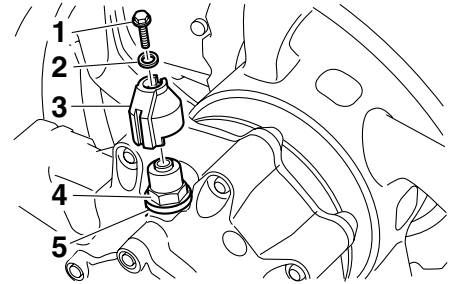
Tightening torques:
Final gear oil check bolt:
10 Nm (1.0 m·kgf, 7.2 ft·lbf)
Final gear oil filler bolt:
23 Nm (2.3 m·kgf, 17 ft·lbf)

7. Install the final gear case breather cap by installing the washer and bolt, and then tighten the bolt to the specified torque.

Tightening torque:
Final gear case breather cap bolt:
10 Nm (1.0 m·kgf, 7.2 ft·lbf)

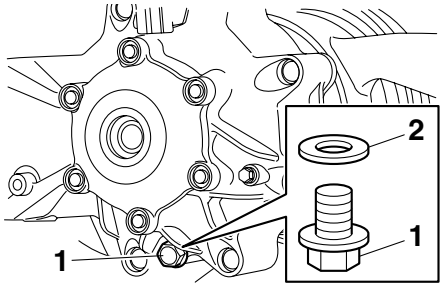
To change the final gear oil

1. Place the vehicle on a level surface.
2. Place an oil pan under the final gear case to collect the used oil.
3. Remove the final gear case breather cap by removing the bolt and washer.



1. Final gear case breather cap bolt
2. Washer
3. Final gear case breather cap
4. Final gear oil filler bolt
5. Gasket

4. Remove the final gear oil filler bolt, the final gear oil drain bolt and their gasket to drain the oil from the final gear case.

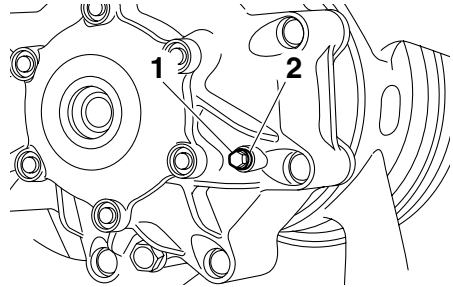


1. Final gear oil drain bolt
2. Gasket

5. Install the drain bolt and its new gasket, and then tighten the bolt to the specified torque.

Tightening torque:
Final gear oil drain bolt:
23 Nm (2.3 m·kgf, 17 ft·lbf)

6. Remove the final gear oil check bolt and its gasket.



1. Final gear oil check bolt
2. Gasket

7. Check the oil check bolt gasket and the oil filler bolt gasket for damage, and replace them if necessary.
8. Refill with the recommended final gear oil until it flows out of the oil check bolt hole.

Recommended final gear oil:
Yamaha genuine shaft drive gear oil
SAE 80 API GL-5
Oil quantity:
0.30 L (0.32 US qt, 0.26 Imp.qt)

9. Install the oil check bolt, the oil filler bolt and their gasket, and then tighten the bolts to the specified torques.

Tightening torques:
Final gear oil check bolt:
10 Nm (1.0 m·kgf, 7.2 ft·lbf)
Final gear oil filler bolt:
23 Nm (2.3 m·kgf, 17 ft·lbf)

10. Install the final gear case breather cap by installing the washer and bolt, and then tighten the bolt to the specified torque.

Tightening torque:
Final gear case breather cap bolt:
10 Nm (1.0 m·kgf, 7.2 ft·lbf)

11. Check the final gear case for oil leakage. If oil is leaking, check for the cause.

EAU20070

Coolant

The coolant level should be checked before each ride. In addition, the coolant must be changed at the intervals specified in the periodic maintenance and lubrication chart.

EAU46691

To check the coolant level

1. Place the vehicle on a level surface and hold it in an upright position.

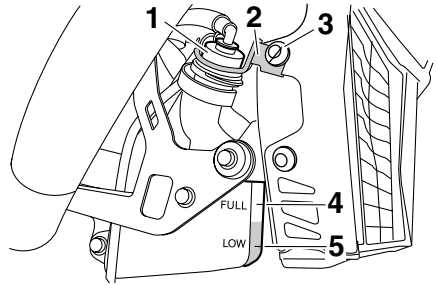
TIP

- The coolant level must be checked on a cold engine since the level varies with engine temperature.
- Make sure that the vehicle is positioned straight up when checking the coolant level. A slight tilt to the side can result in a false reading.

2. Check the coolant level in the coolant reservoir.

TIP

The coolant should be between the minimum and maximum level marks.



1. Coolant reservoir cap
2. Coolant reservoir cap guard
3. Bolt
4. Maximum level mark
5. Minimum level mark

3. If the coolant is at or below the minimum level mark, remove the coolant reservoir cap guard by removing the bolt, and then remove the reservoir cap.
4. Add coolant to the maximum level mark, and then install the reservoir cap. **WARNING! Remove only the coolant reservoir cap. Never attempt to remove the radiator cap when the engine is hot.** [EWA15161] ***NOTICE:*** **If coolant is not available, use distilled water or soft tap water instead. Do not use hard water or salt water since it is harmful to the engine. If water has been used instead of coolant, replace it with coolant as soon as possible, otherwise the cooling system will not be protected against frost and corrosion. If water has been added to the coolant, have a Yamaha dealer check the antifreeze content of the coolant as soon as possible, otherwise the effectiveness of the coolant will be reduced.** [ECA10472]

Coolant reservoir capacity (up to the maximum level mark):
0.27 L (0.29 US qt, 0.24 Imp.qt)

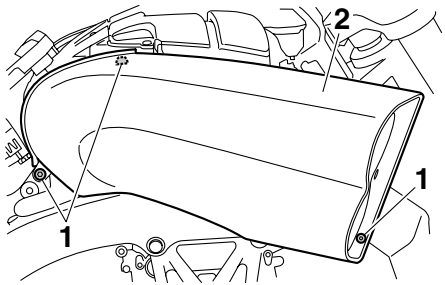
5. Install the coolant reservoir cap guard by installing the bolt.

EAU46423

To change the coolant

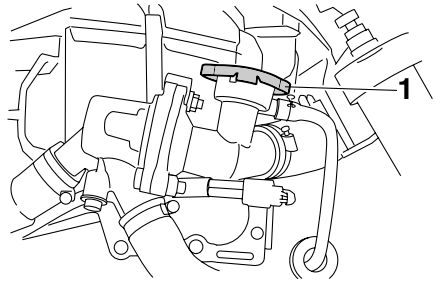
1. Place the vehicle on a level surface and let the engine cool if necessary.
2. Remove cowling A. (See page 7-9.)

3. Remove the air intake duct by removing the bolts.



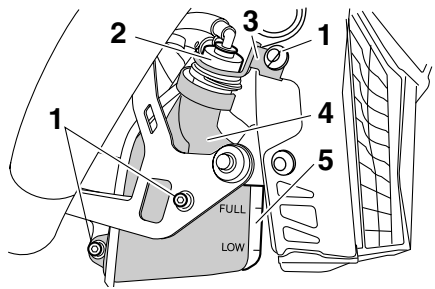
1. Bolt
2. Air intake duct

4. Place a container under the engine to collect the used coolant.
5. Remove the radiator cap. **WARNING! Never attempt to remove the radiator cap when the engine is hot.** [EWA10381]



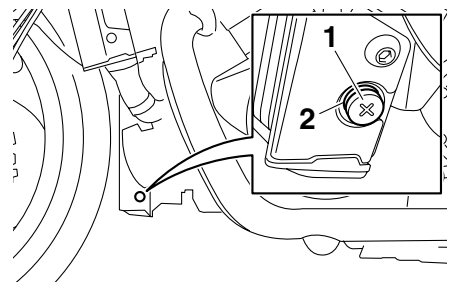
1. Radiator cap

6. Remove the coolant reservoir cover and coolant reservoir by removing the bolts.



1. Bolt
2. Coolant reservoir cap
3. Coolant reservoir cap guard
4. Coolant reservoir cover
5. Coolant reservoir

7. Remove the coolant reservoir cap guard by removing the bolt, and then remove the reservoir cap.
8. Drain the coolant from the coolant reservoir by turning it upside down.
9. Install the coolant reservoir cover and the coolant reservoir by placing them in their original position, and then installing the bolts.
10. Remove the coolant drain screw and its O-ring to drain the cooling system.



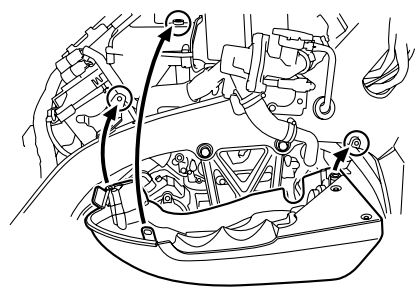
1. Coolant drain screw
2. O-ring

11. After the coolant is completely drained, thoroughly flush the cooling system with clean tap water.
12. Install the coolant drain screw and its new O-ring.

13. Hold the vehicle upright, and pour the specified amount of the recommended coolant into the radiator and reservoir. ***NOTICE:*** **Failing to hold the vehicle upright when filling the radiator with coolant may cause air to be trapped in the cooling system.** [ECA16540]

Antifreeze/water mixture ratio:
1:1
Recommended antifreeze:
High-quality ethylene glycol antifreeze containing corrosion inhibitors for aluminum engines
Coolant quantity:
Radiator capacity (including all routes):
3.75 L (3.96 US qt, 3.30 Imp.qt)
Coolant reservoir capacity (up to the maximum level mark):
0.27 L (0.29 US qt, 0.24 Imp.qt)

14. Install the coolant reservoir cap, and then install the reservoir cap guard by installing the bolt.
15. Install the radiator cap.
16. Start the engine, let it idle for several minutes, and then turn it off.
17. Remove the radiator cap to check the coolant level in the radiator. If necessary, add sufficient coolant until it reaches the top of the radiator, and then install the radiator cap.
18. Check the coolant level in the reservoir. If necessary, remove the coolant reservoir cap guard and the cap, add coolant to the maximum level mark, and then install the cap and the cap guard.
19. Start the engine, and then check the vehicle for coolant leakage. If coolant is leaking, have a Yamaha dealer check the cooling system.
20. Install the air intake duct by installing the bolts.



21. Install the cowling.

EAU36764

Air filter element

The air filter element must be replaced at the intervals specified in the periodic maintenance and lubrication chart. Have a Yamaha dealer replace the air filter element.

EAU44734

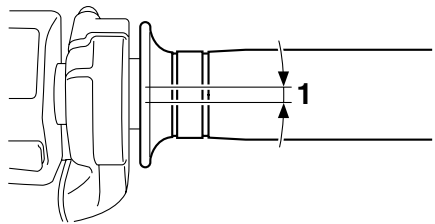
Checking the engine idling speed

Check the engine idling speed and, if necessary, have it corrected by a Yamaha dealer.

Engine idling speed:
950–1050 r/min

EAU21384

Checking the throttle grip free play



1. Throttle grip free play

The throttle grip free play should measure 3.0–5.0 mm (0.12–0.20 in) at the inner edge of the throttle grip. Periodically check the throttle grip free play and, if necessary, have a Yamaha dealer adjust it.

EAU21401

Valve clearance

The valve clearance changes with use, resulting in improper air-fuel mixture and/or engine noise. To prevent this from occurring, the valve clearance must be adjusted by a Yamaha dealer at the intervals specified in the periodic maintenance and lubrication chart.

EAU21754

Tires

To maximize the performance, durability, and safe operation of your motorcycle, note the following points regarding the specified tires.

Tire air pressure

The tire air pressure should be checked and, if necessary, adjusted before each ride.

EWA10503

⚠ WARNING

Operation of this vehicle with improper tire pressure may cause severe injury or death from loss of control.

- **The tire air pressure must be checked and adjusted on cold tires (i.e., when the temperature of the tires equals the ambient temperature).**
- **The tire air pressure must be adjusted in accordance with the riding speed and with the total weight of rider, passenger, cargo, and accessories approved for this model.**

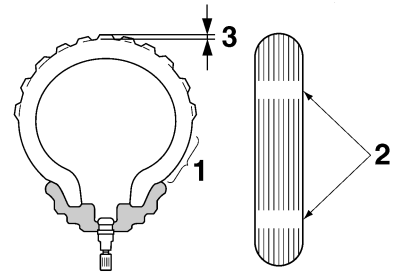
Tire air pressure (measured on cold tires):
0–90 kg (0–198 lb):
Front:
250 kPa (2.50 kgf/cm², 36 psi)
Rear:
290 kPa (2.90 kgf/cm², 42 psi)
VMX17A 90–190 kg (198–419 lb)
VMX17AC 90–189 kg (198–417 lb):
Front:
250 kPa (2.50 kgf/cm², 36 psi)
Rear:
290 kPa (2.90 kgf/cm², 42 psi)
High-speed riding:
Front:
290 kPa (2.90 kgf/cm², 42 psi)
Rear:
290 kPa (2.90 kgf/cm², 42 psi)
Maximum load*:
VMX17A 190 kg (419 lb)
VMX17AC 189 kg (417 lb)
* Total weight of rider, passenger, cargo and accessories

EWA10511

⚠ WARNING

Never overload your vehicle. Operation of an overloaded vehicle could cause an accident.

Tire inspection



1. Tire sidewall
2. Tire wear indicator
3. Tire tread depth

Always check the tires before operating the motorcycle. If a tire tread shows crosswise lines (minimum tread depth), if the tire has a nail or glass fragments in it, or if the sidewall is cracked, contact a Yamaha dealer immediately and have the tire replaced.

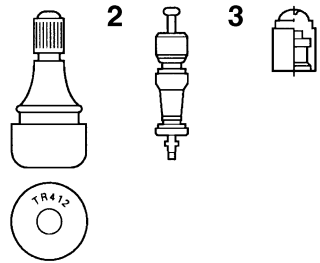
Minimum tire tread depth (front and rear):
1.0 mm (0.04 in)

EWA10581

⚠ WARNING

- **It is dangerous to ride with a worn-out tire. When a tire tread begins to show crosswise lines, have a Yamaha dealer replace the tire immediately.**
- **The replacement of all wheel- and brake-related parts, including the tires, should be left to a Yamaha dealer, who has the necessary professional knowledge and experience to do so.**
- **Ride at moderate speeds after changing a tire since the tire surface must first be "broken in" for it to develop its optimal characteristics.**

Tire information



1. Tire air valve
2. Tire air valve core
3. Tire air valve cap with seal

This motorcycle is equipped with cast wheels and tubeless tires with valves.

EWA10481

⚠ WARNING

- **The front and rear tires should be of the same make and design, otherwise the handling characteristics of the motorcycle may be different, which could lead to an accident.**
- **Always make sure that the valve caps are securely installed to prevent air pressure leakage.**
- **Use only the tire valves and valve cores listed below to avoid tire deflation during a high-speed ride.**

After extensive tests, only the tires listed below have been approved for this model by Yamaha Motor Co., Ltd.

Front tire:
Size:
120/70R18M/C 59V
Manufacturer/model:
BRIDGESTONE/BT028F
Rear tire:
Size:
200/50R18M/C 76V
Manufacturer/model:
BRIDGESTONE/BT028R
FRONT and REAR:
Tire air valve:
TR412
Valve core:
#9100 (original)

EWA10600

⚠ WARNING

This motorcycle is fitted with super-high-speed tires. Note the following points in order to make the most efficient use of these tires.

- **Use only the specified replacement tires. Other tires may run the danger of bursting at super high speeds.**
- **Brand-new tires can have a relatively poor grip on certain road surfaces until they have been "broken in". Therefore, it is advisable before doing any high-speed riding to ride conservatively for approximately 100 km (60 mi) after installing a new tire.**
- **The tires must be warmed up before a high-speed run.**
- **Always adjust the tire air pressure according to the operating conditions.**

EAU21962

Cast wheels

To maximize the performance, durability, and safe operation of your vehicle, note the following points regarding the specified wheels.

- The wheel rims should be checked for cracks, bends, warpage or other damage before each ride. If any damage is found, have a Yamaha dealer replace the wheel. Do not attempt even the smallest repair to the wheel. A deformed or cracked wheel must be replaced.
- The wheel should be balanced whenever either the tire or wheel has been changed or replaced. An unbalanced wheel can result in poor performance, adverse handling characteristics, and a shortened tire life.

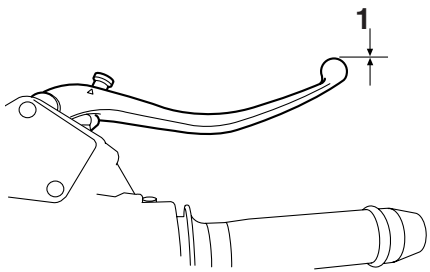
EAU42850

Clutch lever

Since this model is equipped with a hydraulic clutch, adjusting the clutch lever free play is not needed. However, it is necessary to check the hydraulic system for leakage before each ride. If the clutch lever free play does become excessive, and shifting becomes rough or clutch slippage occurs, causing poor acceleration, there may be air in the clutch system. If there is air in the hydraulic system, have a Yamaha dealer bleed the system before operating the motorcycle.

EAU37913

Checking the brake lever free play



1. No brake lever free play

There should be no free play at the brake lever end. If there is free play, have a Yamaha dealer inspect the brake system.

EWA14211

⚠ WARNING

A soft or spongy feeling in the brake lever can indicate the presence of air in the hydraulic system. If there is air in the hydraulic system, have a Yamaha dealer bleed the system before operating the vehicle. Air in the hydraulic system will diminish the braking performance, which may result in loss of control and an accident.

EAU36503

Brake light switches

The brake light, which is activated by the brake pedal and brake lever, should come on just before braking takes effect. If necessary, have a Yamaha dealer adjust the brake light switches.

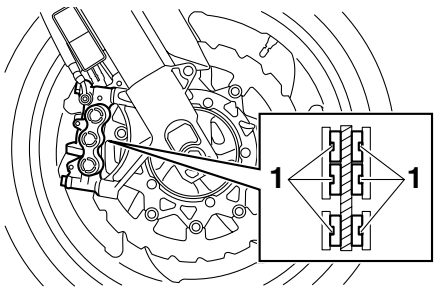
EAU22392

Checking the front and rear brake pads

The front and rear brake pads must be checked for wear at the intervals specified in the periodic maintenance and lubrication chart.

EAU43062

Front brake pads

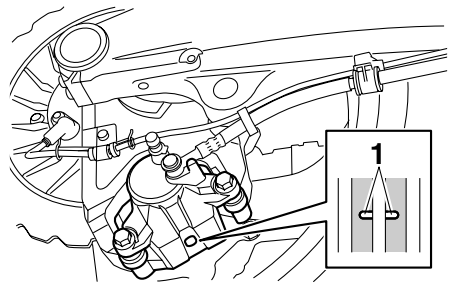


1. Brake pad wear indicator groove

The front brake calipers are equipped with two sets of brake pads.
Each front brake pad is provided with one or two wear indicator grooves, which allow you to check the brake pad wear without having to disassemble the brake. To check the brake pad wear, check the wear indicator grooves. If a brake pad has worn to the point that a wear indicator groove almost appears, have a Yamaha dealer replace the brake pads as a set.

EAU22470

Rear brake pads



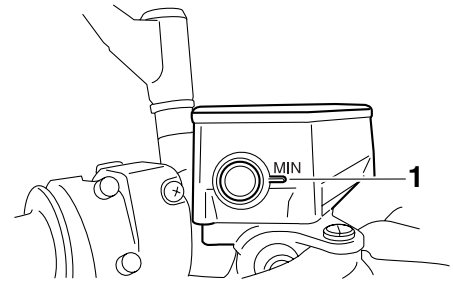
1. Brake pad wear indicator groove

Each rear brake pad is provided with a wear indicator groove, which allows you to check the brake pad wear without having to disassemble the brake. To check the brake pad wear, check the wear indicator groove. If a brake pad has worn to the point that the wear indicator groove has almost disappeared, have a Yamaha dealer replace the brake pads as a set.

EAU46540

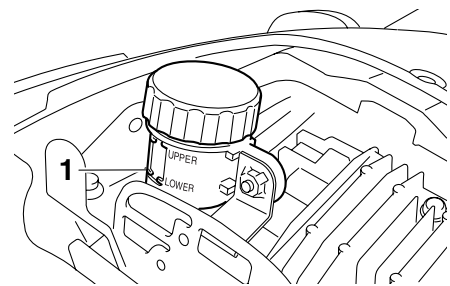
Checking the brake fluid level

Front brake



1. Minimum level mark

Rear brake



1. Minimum level mark

Insufficient brake fluid may allow air to enter the brake system, possibly causing it to become ineffective.

Before riding, check that the brake fluid is above the minimum level mark and replenish if necessary. A low brake fluid level may indicate worn brake pads and/or brake system leakage. If the brake fluid level is low, be sure to check the brake pads for wear and the brake system for leakage.

TIP

The rear brake fluid reservoir is located under the passenger seat. (See page 4-22.)

Observe these precautions:

- When checking the fluid level, make sure that the top of the brake fluid reservoir is level.
- Use only the recommended quality brake fluid, otherwise the rubber seals may deteriorate, causing leakage and poor braking performance.

Recommended brake fluid:
DOT 4

- Refill with the same type of brake fluid. Mixing fluids may result in a harmful chemical reaction and lead to poor braking performance.
- Be careful that water or dust does not enter the brake fluid reservoir when refilling. Water will significantly lower the boiling point of the fluid and may result in vapor lock, and dirt may clog the ABS hydraulic unit valves.
- Brake fluid may deteriorate painted surfaces or plastic parts. Always clean up spilled fluid immediately.
- As the brake pads wear, it is normal for the brake fluid level to gradually go down. However, if the brake fluid level goes down suddenly, have a Yamaha dealer check the cause.

EAU22751

Changing the brake and clutch fluids

Have a Yamaha dealer change the brake and clutch fluids at the intervals specified in the TIP after the periodic maintenance and lubrication chart. In addition, have the oil seals of the brake and clutch master cylinders and calipers as well as the brake and clutch hoses replaced at the intervals listed below or whenever they are damaged or leaking.

- Oil seals: Replace every two years.
- Brake and clutch hoses: Replace every four years.

EAU23093

Checking and lubricating the cables

The operation of all control cables and the condition of the cables should be checked before each ride, and the cables and cable ends should be lubricated if necessary. If a cable is damaged or does not move smoothly, have a Yamaha dealer check or replace it. **WARNING! Damage to the outer housing of cables may result in internal rusting and cause interference with cable movement. Replace damaged cables as soon as possible to prevent unsafe conditions.**

[EWA10711]

Recommended lubricant:
Yamaha Chain and Cable Lube or engine oil

EAU23113

Checking and lubricating the throttle grip and cable

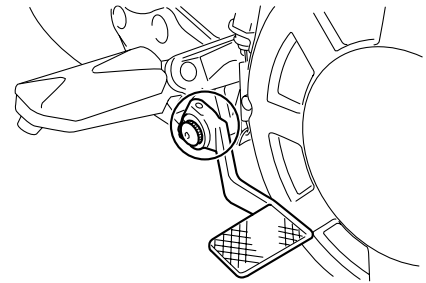
The operation of the throttle grip should be checked before each ride. In addition, the cable should be lubricated by a Yamaha dealer at the intervals specified in the periodic maintenance chart.

The throttle cable is equipped with a rubber boot. Make sure that the boot is securely installed. Even though the boot is installed correctly, it does not completely protect the cable from water entry. Therefore, use care not to pour water directly onto the boot or cable when washing the vehicle. If the cable or boot becomes dirty, wipe clean with a moist cloth.

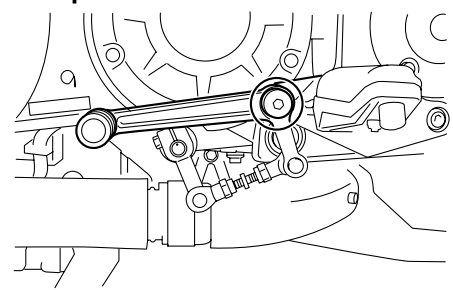
EAU44272

Checking and lubricating the brake and shift pedals

Brake pedal



Shift pedal



The operation of the brake and shift pedals should be checked before each ride, and the pedal pivots should be lubricated if necessary.

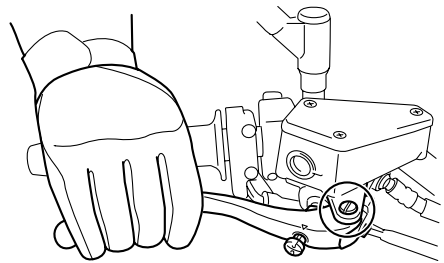
Recommended lubricant:
Lithium-soap-based grease

EAU43600

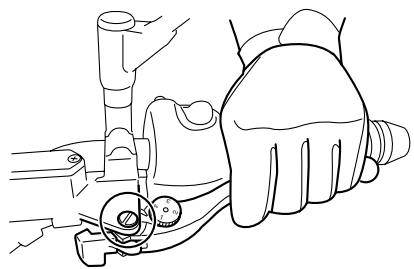
Checking and lubricating the brake and clutch levers

Recommended lubricant:
Silicone grease

Brake lever



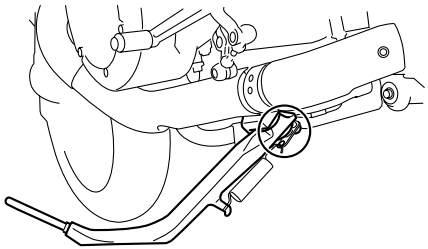
Clutch lever



The operation of the brake and clutch levers should be checked before each ride, and the lever pivots should be lubricated if necessary.

EAU23202

Checking and lubricating the sidestand



The operation of the sidestand should be checked before each ride, and the sidestand pivot and metal-to-metal contact surfaces should be lubricated if necessary.

EWA10731

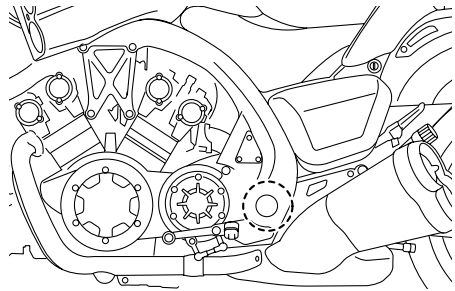
⚠ WARNING

If the sidestand does not move up and down smoothly, have a Yamaha dealer check or repair it. Otherwise, the sidestand could contact the ground and distract the operator, resulting in a possible loss of control.

Recommended lubricant:
Lithium-soap-based grease

EAUM1651

Lubricating the swingarm pivots



The swingarm pivots must be lubricated by a Yamaha dealer at the intervals specified in the periodic maintenance and lubrication chart.

Recommended lubricant:
Lithium-soap-based grease

EAU23272

Checking the front fork

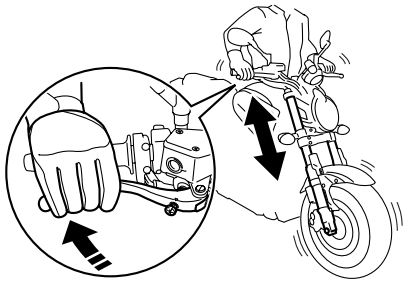
The condition and operation of the front fork must be checked as follows at the intervals specified in the periodic maintenance and lubrication chart.

To check the condition

Check the inner tubes for scratches, damage and excessive oil leakage.

To check the operation

1. Place the vehicle on a level surface and hold it in an upright position. **WARNING! To avoid injury, securely support the vehicle so there is no danger of it falling over.** [EWA10751]
2. While applying the front brake, push down hard on the handlebars several times to check if the front fork compresses and rebounds smoothly.



ECA10590

NOTICE

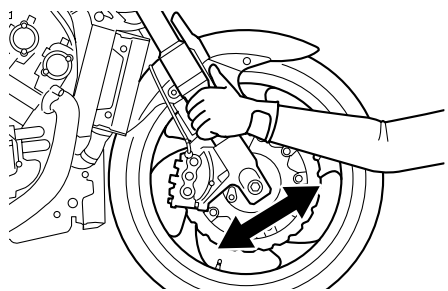
If any damage is found or the front fork does not operate smoothly, have a Yamaha dealer check or repair it.

EAU23283

Checking the steering

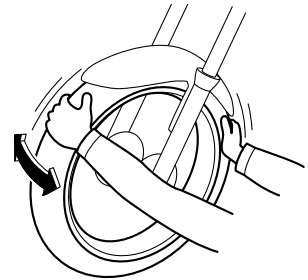
Worn or loose steering bearings may cause danger. Therefore, the operation of the steering must be checked as follows at the intervals specified in the periodic maintenance and lubrication chart.

1. Place a stand under the engine to raise the front wheel off the ground. (See page 7-40 for more information.) **WARNING! To avoid injury, securely support the vehicle so there is no danger of it falling over.** [EWA10751]
2. Hold the lower ends of the front fork legs and try to move them forward and backward. If any free play can be felt, have a Yamaha dealer check or repair the steering.



EAU23291

Checking the wheel bearings



The front and rear wheel bearings must be checked at the intervals specified in the periodic maintenance and lubrication chart. If there is play in the wheel hub or if the wheel does not turn smoothly, have a Yamaha dealer check the wheel bearings.

EAU46555

Battery

The battery is located under cowling A. (See page 7-9.)

This model is equipped with a VRLA (Valve Regulated Lead Acid) battery. There is no need to check the electrolyte or to add distilled water. However, the battery lead connections need to be checked and, if necessary, tightened.

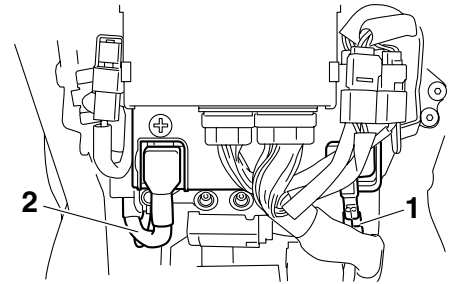
EWA10760

⚠ WARNING

- **Electrolyte is poisonous and dangerous since it contains sulfuric acid, which causes severe burns. Avoid any contact with skin, eyes or clothing and always shield your eyes when working near batteries. In case of contact, administer the following FIRST AID.**
  - **EXTERNAL: Flush with plenty of water.**
  - **INTERNAL: Drink large quantities of water or milk and immediately call a physician.**
  - **EYES: Flush with water for 15 minutes and seek prompt medical attention.**
- **Batteries produce explosive hydrogen gas. Therefore, keep sparks, flames, cigarettes, etc., away from the battery and provide sufficient ventilation when charging it in an enclosed space.**
- **KEEP THIS AND ALL BATTERIES OUT OF THE REACH OF CHILDREN.**

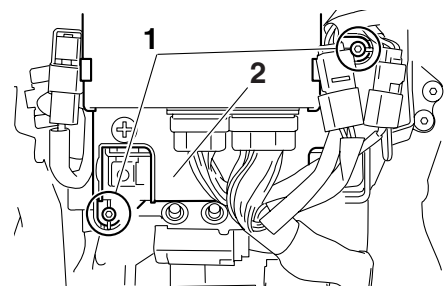
To remove the battery

1. Remove cowling A. (See page 7-9.)
2. Disconnect the negative battery lead first, then the positive battery lead by removing their bolt.
   NOTICE: **When removing the battery, be sure the key is turned to "OFF", then disconnect the negative lead before disconnecting the positive lead.**
   [ECA16302]



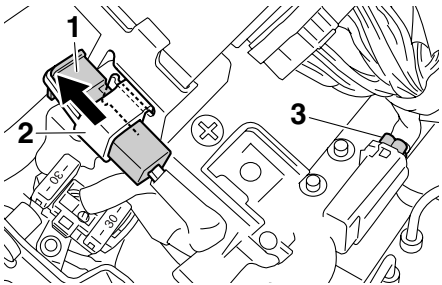
1. Negative battery lead (black)
2. Positive battery lead (red)

3. Remove the battery cover bolts, lift the battery cover (together with the ECU), then move the cover to the side.



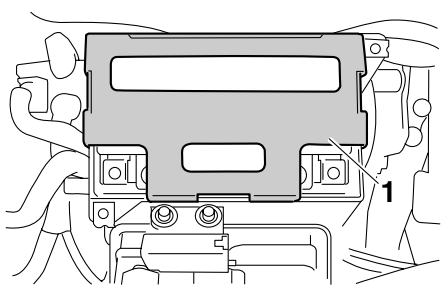
1. Bolt
2. Battery cover

4. Remove the main fuse (together with the holding band) from its holder.
5. Disconnect coupler A.



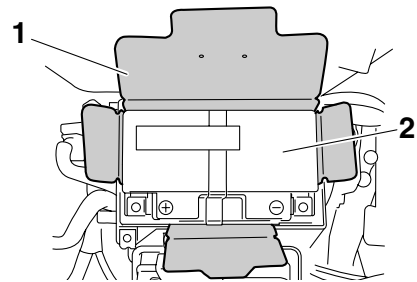
1. Main fuse
2. Holding band
3. Coupler A

6. Remove the rubber damper.



1. Rubber damper

7. Unfold the heat insulator as shown.



1. Heat insulator
2. Battery

8. Pull the battery out of its compartment.

To charge the battery

Have a Yamaha dealer charge the battery as soon as possible if it seems to have discharged. Keep in mind that the battery tends to discharge more quickly if the vehicle is equipped with optional electrical accessories.

ECA16521

NOTICE

To charge a VRLA (Valve Regulated Lead Acid) battery, a special (constant-voltage) battery charger is required. Using a conventional battery charger will damage the battery.

To store the battery

1. If the vehicle will not be used for more than one month, remove the battery, fully charge it, and then place it in a cool, dry place. ***NOTICE:*** **When removing the battery, be sure the key is turned to "OFF", then disconnect the negative lead before disconnecting the positive lead.**

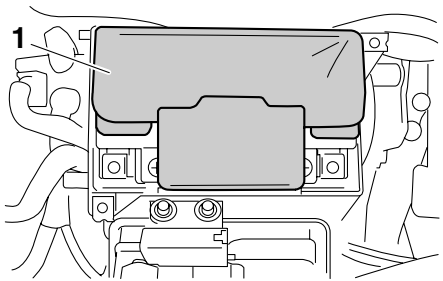
   [ECA16302]
2. If the battery will be stored for more than two months, check it at least once a month and fully charge it if necessary.

To install the battery

TIP

Be sure the battery is fully charged.

1. Place the battery in its compartment.
2. Fold the heat insulator back to its original position. ***NOTICE:*** **Make sure that the heat insulator is in its original position and it is properly folded.** [ECA16550]



1. Heat insulator

3. Install the rubber damper.
4. Connect coupler A.
5. Install the main fuse (together with the holding band) on its holder.
6. Place the battery cover (together with the ECU) in the original position, and then install the bolts.
7. Connect the positive battery lead first, then connect the negative battery lead by installing their bolt. ***NOTICE:*** **When installing the battery, be sure the key is turned to "OFF", then connect the positive lead before connecting the negative lead.** [ECA16840]
8. Install the cowling.

ECA16530

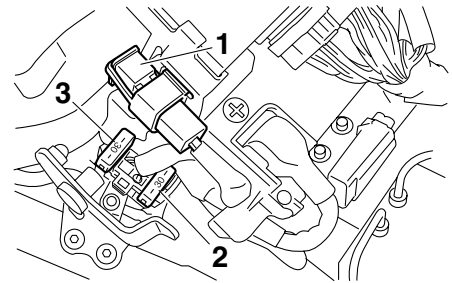
NOTICE

Always keep the battery charged. Storing a discharged battery can cause permanent battery damage.

EAU46453

Replacing the fuses

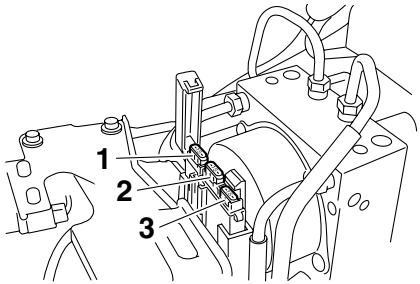
The main fuse and the ABS motor fuse are located behind cowling A. (See page 7-9.) Fuse box 1 is located under the rider seat. (See page 4-22.)



1. Main fuse
2. ABS motor fuse
3. ABS motor spare fuse

7

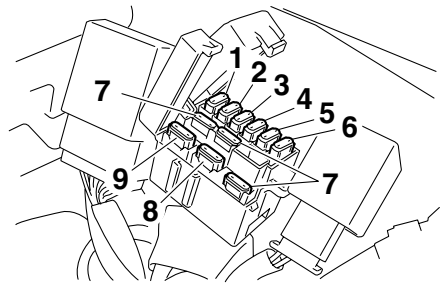
Fuse box 1



1. ABS solenoid fuse
2. Fuel injection system fuse
3. Spare fuse

Fuse box 2 is located behind panel B. (See page 7-9.)

Fuse box 2



1. Ignition fuse
2. ABS control unit fuse
3. Headlight fuse
4. Backup fuse (for clock)
5. Electronic throttle valve fuse
6. Radiator fan fuse
7. Spare fuse
8. Signaling system fuse
9. Sub radiator fan fuse

If a fuse is blown, replace it as follows.

1. Turn the key to "OFF" and turn off the electrical circuit in question.
2. Remove the blown fuse, and then install a new fuse of the specified amperage. **WARNING! Do not use a fuse of a higher amperage rating than recommended to avoid causing extensive damage to the electrical system and possibly a fire.** [EWA15131]

Specified fuses:
Main fuse:
50.0 A
Ignition fuse:
20.0 A
Signaling system fuse:
15.0 A
Headlight fuse:
15.0 A
Radiator fan fuse:
20.0 A
Sub radiator fan fuse:
7.5 A
Fuel injection system fuse:
15.0 A
ABS control unit fuse:
7.5 A
ABS motor fuse:
30.0 A
ABS solenoid fuse:
15.0 A
Backup fuse:
7.5 A
Electronic throttle valve fuse:
7.5 A

3. Turn the key to "ON" and turn on the electrical circuit in question to check if the device operates.

4. If the fuse immediately blows again, have a Yamaha dealer check the electrical system.

EAU46461

Replacing the headlight bulb

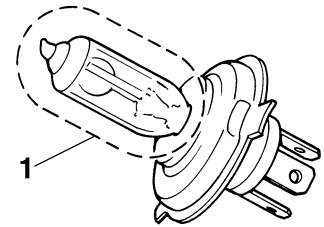
This model is equipped with a quartz bulb headlight. If the headlight bulb burns out, replace it as follows.

ECA10650

NOTICE

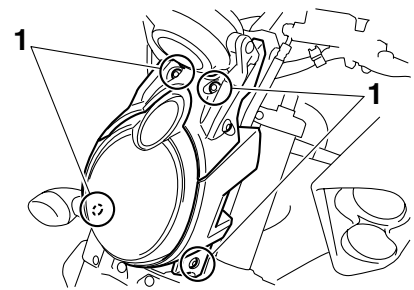
Take care not to damage the following parts:

- **Headlight bulb**
  Do not touch the glass part of the headlight bulb to keep it free from oil, otherwise the transparency of the glass, the luminosity of the bulb, and the bulb life will be adversely affected. Thoroughly clean off any dirt and fingerprints on the headlight bulb using a cloth moistened with alcohol or thinner.
- **Headlight lens**
  Do not affix any type of tinted film or stickers to the headlight lens.
  Do not use a headlight bulb of a wattage higher than specified.



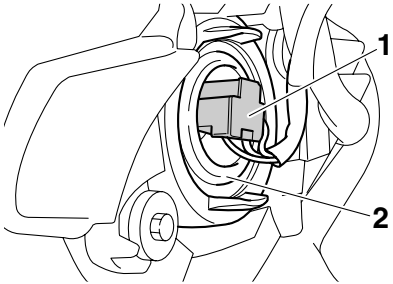
1. Do not touch the glass part of the bulb.

1. Remove the headlight unit by removing the bolts.



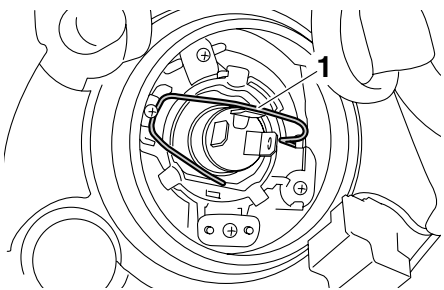
1. Bolt

2. Disconnect the headlight coupler, and then remove the bulb cover.



1. Headlight coupler
2. Headlight bulb cover

3. Unhook the headlight bulb holder, and then remove the burnt-out bulb.



1. Headlight bulb holder

4. Place a new headlight bulb into position, and then secure it with the bulb holder.
5. Install the headlight bulb cover, and then connect the coupler.
6. Install the headlight unit by installing the bolts.
7. Have a Yamaha dealer adjust the headlight beam if necessary.

EAU24181

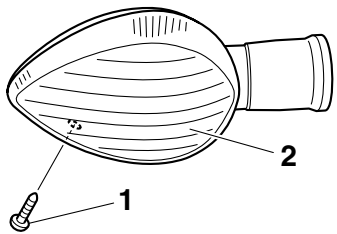
Tail/brake light

This model is equipped with an LED-type tail/brake light.
If the tail/brake light does not come on, have a Yamaha dealer check it.

EAU24204

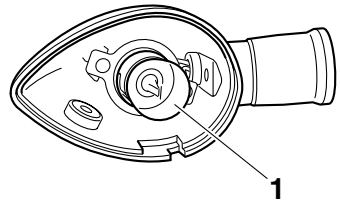
Replacing a turn signal light bulb

1. Remove the turn signal light lens by removing the screw.



1. Screw
2. Turn signal light lens

2. Remove the burnt-out bulb by pushing it in and turning it counterclockwise.



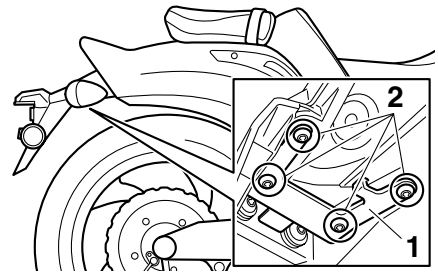
1. Turn signal light bulb

3. Insert a new bulb into the socket, push it in, and then turn it clockwise until it stops.
4. Install the lens by installing the screw. ***NOTICE:*** **Do not overtighten the screw, otherwise the lens may break.** [ECA11191]

EAU50450

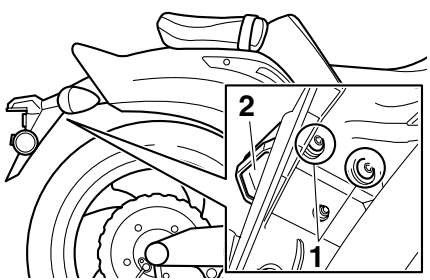
Replacing a license plate light bulb

1. Remove the holding plate by removing the bolts.



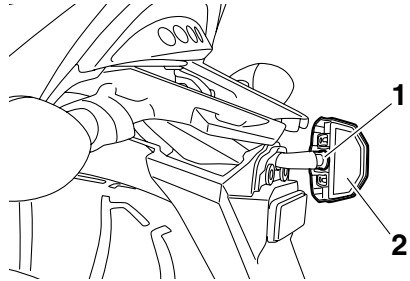
1. Holding plate
2. Bolt

2. Remove the license plate light unit bolts.



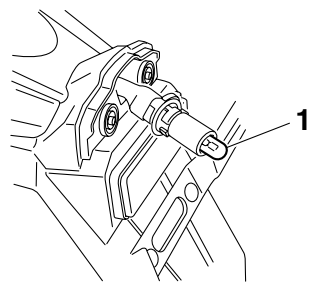
1. Bolt
2. License plate light unit

3. Pull the license plate light unit outward as shown to access the bulb and its socket.
4. Remove the license plate light socket (together with the bulb) by turning it counterclockwise, and then pulling it out.



1. License plate light bulb socket
2. License plate light unit

5. Remove the burnt-out bulb by pulling it out.



1. License plate light bulb

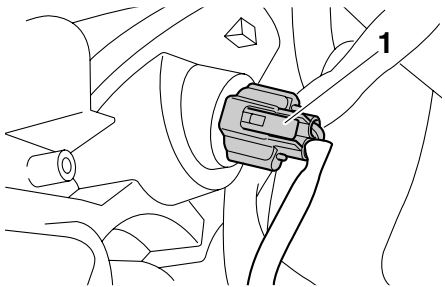
6. Insert a new bulb into the socket.
7. Install the socket (together with the bulb) by pushing it in, and then turning it clockwise until it stops.
8. Place the license plate light unit in the original position, and then install the bolts.
9. Install the holding plate by installing the bolts.

EAU46403

Replacing the auxiliary light bulb

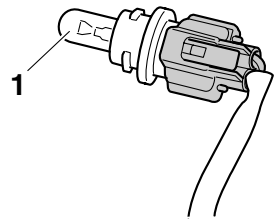
If the auxiliary light bulb burns out, replace it as follows.

1. Remove the headlight unit. (See page 7-36.)
2. Remove the auxiliary light socket (together with the bulb) by turning it counterclockwise.



1. Auxiliary light bulb socket

3. Remove the burnt-out bulb by pulling it out of the socket.



1. Auxiliary light bulb

4. Insert a new bulb into the socket.
5. Install the auxiliary light socket (together with the bulb) by turning it clockwise.
6. Install the headlight unit.

EAU24350

Supporting the motorcycle

Since this model is not equipped with a centerstand, follow these precautions when removing the front and rear wheel or performing other maintenance requiring the motorcycle to stand upright. Check that the motorcycle is in a stable and level position before starting any maintenance. A strong wooden box can be placed under the engine for added stability.

To service the front wheel

1. Stabilize the rear of the motorcycle by using a motorcycle stand or, if an additional motorcycle stand is not available, by placing a jack under the frame in front of the rear wheel.
2. Raise the front wheel off the ground by using a motorcycle stand.

To service the rear wheel

Raise the rear wheel off the ground by using a motorcycle stand or, if a motorcycle stand is not available, by placing

a jack either under each side of the frame in front of the rear wheel or under each side of the swingarm.

EAU25871

Troubleshooting

Although Yamaha motorcycles receive a thorough inspection before shipment from the factory, trouble may occur during operation. Any problem in the fuel, compression, or ignition systems, for example, can cause poor starting and loss of power.

The following troubleshooting charts represent quick and easy procedures for checking these vital systems yourself. However, should your motorcycle require any repair, take it to a Yamaha dealer, whose skilled technicians have the necessary tools, experience, and know-how to service the motorcycle properly.

Use only genuine Yamaha replacement parts. Imitation parts may look like Yamaha parts, but they are often inferior, have a shorter service life and can lead to expensive repair bills.

EWA15141

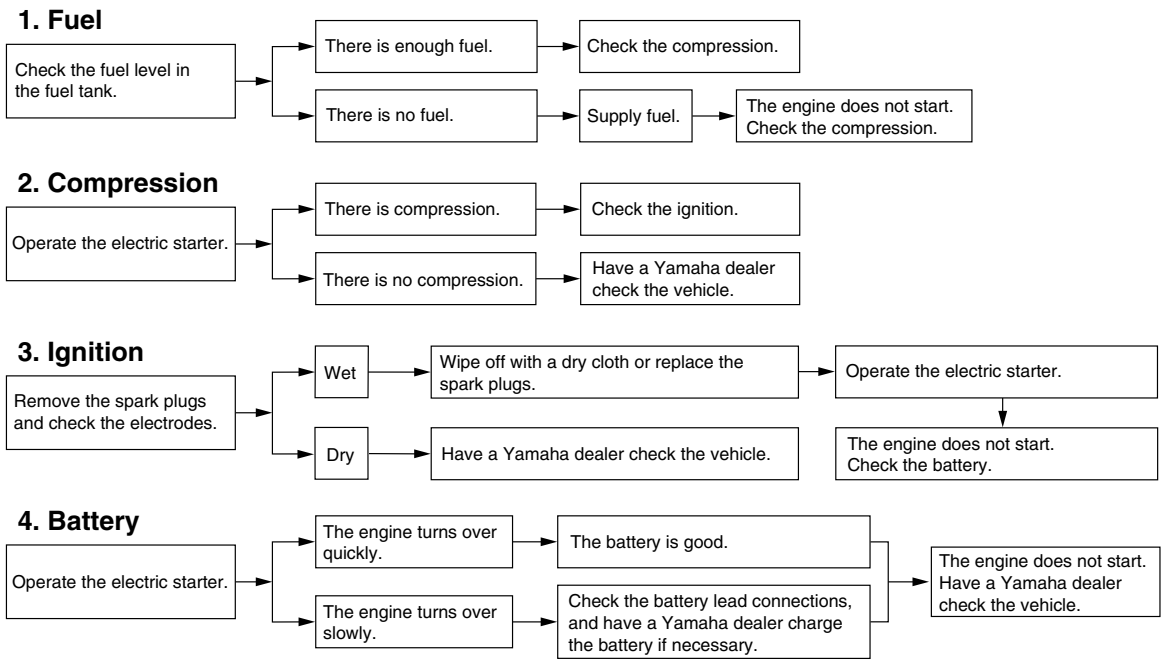
⚠ WARNING

When checking the fuel system, do not smoke, and make sure there are no open flames or sparks in the area, including pilot lights from water heaters or furnaces. Gasoline or gasoline vapors can ignite or explode, causing severe injury or property damage.

EAU46791

Troubleshooting charts

Starting problems or poor engine performance

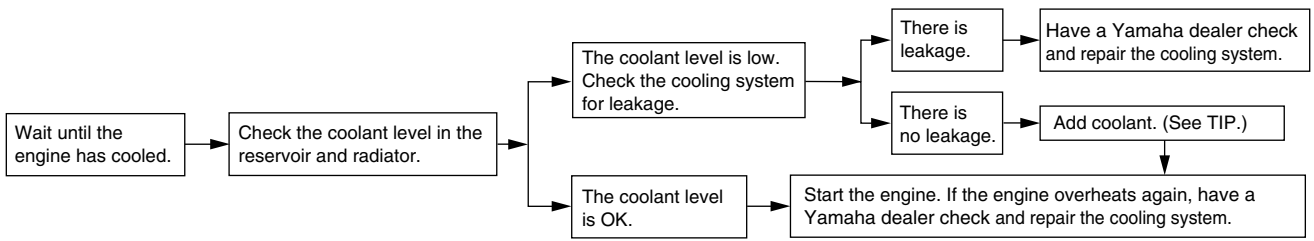

1. Fuel
Check the fuel level in the fuel tank.
There is enough fuel.
Check the compression.
There is no fuel.
Supply fuel.
The engine does not start. Check the compression.
2. Compression
Operate the electric starter.
There is compression.
Check the ignition.
There is no compression.
Have a Yamaha dealer check the vehicle.
3. Ignition
Remove the spark plugs and check the electrodes.
Wet
Wipe off with a dry cloth or replace the spark plugs.
Operate the electric starter.
Dry
Have a Yamaha dealer check the vehicle.
The engine does not start. Check the battery.
4. Battery
Operate the electric starter.
The engine turns over quickly.
The battery is good.
The engine does not start. Have a Yamaha dealer check the vehicle.
The engine turns over slowly.
Check the battery lead connections, and have a Yamaha dealer charge the battery if necessary.

Engine overheating

EWAT1040

⚠ WARNING

- **Do not remove the radiator cap when the engine and radiator are hot. Scalding hot fluid and steam may be blown out under pressure, which could cause serious injury. Be sure to wait until the engine has cooled.**
- **Place a thick rag, like a towel, over the radiator cap, and then slowly rotate the cap counterclockwise to the detent to allow any residual pressure to escape. When the hissing sound has stopped, press down on the cap while turning it counterclockwise, and then remove the cap.**


Wait until the engine has cooled.
Check the coolant level in the reservoir and radiator.
The coolant level is low. Check the cooling system for leakage.
There is leakage.
Have a Yamaha dealer check and repair the cooling system.
There is no leakage.
Add coolant. (See TIP.)
The coolant level is OK.
Start the engine. If the engine overheats again, have a Yamaha dealer check and repair the cooling system.

TIP

If coolant is not available, tap water can be temporarily used instead, provided that it is changed to the recommended coolant as soon as possible.

EAU37833

Matte color caution

ECA15192

NOTICE

Some models are equipped with matte colored finished parts. Be sure to consult a Yamaha dealer for advice on what products to use before cleaning the vehicle. Using a brush, harsh chemical products or cleaning compounds when cleaning these parts will scratch or damage their surface. Wax also should not be applied to any matte colored finished parts.

EAU46410

Care

While the open design of a motorcycle reveals the attractiveness of the technology, it also makes it more vulnerable. Rust and corrosion can develop even if high-quality components are used. A rusty exhaust pipe may go unnoticed on a car, however, it detracts from the overall appearance of a motorcycle. Frequent and proper care does not only comply with the terms of the warranty, but it will also keep your motorcycle looking good, extend its life and optimize its performance.

Before cleaning

1. Cover the muffler outlets with a plastic bag after the engine has cooled down.
2. Make sure that all caps and covers as well as all electrical couplers and connectors, including the spark plug caps, are tightly installed.
3. Remove extremely stubborn dirt, like oil burnt onto the crankcase, with a degreasing agent and a brush, but never apply such products onto seals, gaskets and wheel axles. Always rinse the dirt and degreaser off with water.

Cleaning

ECA10772

NOTICE

- **Avoid using strong acidic wheel cleaners, especially on spoked wheels. If such products are used on hard-to-remove dirt, do not leave the cleaner on the affected area any longer than instructed. Also, thoroughly rinse the area off with water, immediately dry it, and then apply a corrosion protection spray.**
- **Improper cleaning can damage plastic parts (such as cowlings, panels, windshields, headlight lenses, meter lenses, etc.) and the mufflers. Use only a soft, clean cloth or sponge with water to clean plastic. However, if the plastic parts cannot be thoroughly cleaned with water, diluted mild detergent with water may be used. Be sure to rinse**

off any detergent residue using plenty of water, as it is harmful to plastic parts.

- **Do not use any harsh chemical products on plastic parts. Be sure to avoid using cloths or sponges which have been in contact with strong or abrasive cleaning products, solvent or thinner, fuel (gasoline), rust removers or inhibitors, brake fluid, antifreeze or electrolyte.**
- **Do not use high-pressure washers or steam-jet cleaners since they cause water seepage and deterioration in the following areas: seals (of wheel and swingarm bearings, fork and brakes), electric components (couplers, connectors, instruments, switches and lights), breather hoses and vents.**
- **For motorcycles equipped with a windshield: Do not use strong cleaners or hard sponges as they will cause dulling or scratching. Some cleaning compounds for plastic may leave scratches on the windshield. Test the product on a small hidden part of the windshield to make sure that it does not leave any marks. If the windshield is scratched, use a quality plastic polishing compound after washing.**

After normal use

Remove dirt with warm water, a mild detergent, and a soft, clean sponge, and then rinse thoroughly with clean water. Use a toothbrush or bottlebrush for hard-to-reach areas. Stubborn dirt and insects will come off more easily if the area is covered with a wet cloth for a few minutes before cleaning.

After riding in the rain, near the sea or on salt-sprayed roads

Since sea salt or salt sprayed on roads during winter are extremely corrosive in combination with water, carry out the following steps after each ride in the rain, near the sea or on salt-sprayed roads.

TIP

Salt sprayed on roads in the winter may remain well into spring.

1. Clean the motorcycle with cold water and a mild detergent, after the engine has cooled down. ***NOTICE:*** **Do not use warm water since it increases the corrosive action of the salt.** [ECA10791]
2. After drying the motorcycle, apply a corrosion protection spray on all metal, including chrome- and nickel-plated, surfaces (except the titanium mufflers) to prevent corrosion.

Cleaning the titanium mufflers

This model is equipped with titanium mufflers, which require the following special care.

- Use only a soft, clean cloth or sponge with mild detergent and water to clean the titanium mufflers. However, if the mufflers cannot be thoroughly cleaned with mild detergent, alkaline products and a soft brush may be used.

- Never use compounds or other special treatments to clean the titanium mufflers, as they will remove the finish on the outer surface of the mufflers.
- Even the smallest amounts of oil, such as from oily towels or fingerprints, will leave stains on the titanium mufflers, which can be removed with a mild detergent.
- Note that the thermally induced discoloring of the portion of the exhaust pipe leading into the titanium mufflers is normal and cannot be removed.

After cleaning

1. Dry the motorcycle with a chamois or an absorbing cloth.
2. Immediately dry the drive chain and lubricate it to prevent it from rusting.
3. Use a chrome polish to shine chrome, aluminum and stainless-steel parts.
4. To prevent corrosion, it is recommended to apply a corrosion protection spray on all metal, including chrome- and nickel-plated, surfaces.
5. Use spray oil as a universal cleaner to remove any remaining dirt.
6. Touch up minor paint damage caused by stones, etc.
7. Wax all painted surfaces.
8. Let the motorcycle dry completely before storing or covering it.

EWA11131

⚠ WARNING

Contaminants on the brakes or tires can cause loss of control.

- **Make sure that there is no oil or wax on the brakes or tires.**
- **If necessary, clean the brake discs and brake linings with a regular brake disc cleaner or acetone, and wash the tires with warm water and a mild detergent. Before riding at higher speeds, test the motorcycle's braking performance and cornering behavior.**

ECA10800

NOTICE

- **Apply spray oil and wax sparingly and make sure to wipe off any excess.**
- **Never apply oil or wax to any rubber and plastic parts, but treat them with a suitable care product.**
- **Avoid using abrasive polishing compounds as they will wear away the paint.**

TIP

- Consult a Yamaha dealer for advice on what products to use.
- Washing, rainy weather or humid climates can cause the headlight lens to fog. Turning the headlight on for a short period of time will help remove the moisture from the lens.

Storage

EAU26243

Short-term

Always store your motorcycle in a cool, dry place and, if necessary, protect it against dust with a porous cover. Be sure the engine and the exhaust system are cool before covering the motorcycle.

ECA10810

NOTICE

- **Storing the motorcycle in a poorly ventilated room or covering it with a tarp, while it is still wet, will allow water and humidity to seep in and cause rust.**
- **To prevent corrosion, avoid damp cellars, stables (because of the presence of ammonia) and areas where strong chemicals are stored.**

Long-term

Before storing your motorcycle for several months:

1. Follow all the instructions in the “Care” section of this chapter.
2. Fill up the fuel tank and add fuel stabilizer (if available) to prevent the fuel tank from rusting and the fuel from deteriorating.
3. Perform the following steps to protect the cylinders, piston rings, etc. from corrosion.
   a. Remove the spark plug caps and spark plugs.
   b. Pour a teaspoonful of engine oil into each spark plug bore.
   c. Install the spark plug caps onto the spark plugs, and then place the spark plugs on the cylinder head so that the electrodes are grounded. (This will limit sparking during the next step.)
   d. Turn the engine over several times with the starter. (This will coat the cylinder walls with oil.) **WARNING! To prevent damage or injury from sparking, make sure to ground the spark plug electrodes while turning the engine over.** [EWA10951]
   e. Remove the spark plug caps from the spark plugs, and then install the spark plugs and the spark plug caps.
4. Lubricate all control cables and the pivoting points of all levers and pedals as well as of the sidestand/centerstand.
5. Check and, if necessary, correct the tire air pressure, and then lift the motorcycle so that both of its wheels are off the ground. Alternatively, turn the wheels a little every month in order to prevent the tires from becoming degraded in one spot.
6. Cover the muffler outlets with plastic bags to prevent moisture from entering them.
7. Remove the battery and fully charge it. Store it in a cool, dry place and charge it once a month. Do not store the battery in an excessively cold or warm place [less than 0 °C (30 °F) or more than 30 °C (90 °F)]. For more information on storing the battery, see page 7-32.

TIP

Make any necessary repairs before storing the motorcycle.

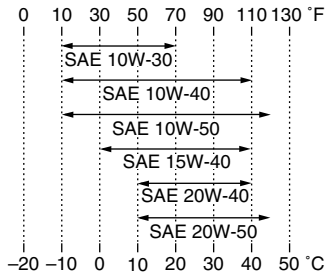
SPECIFICATIONS

Dimensions:
Overall length:
2395 mm (94.3 in)
Overall width:
820 mm (32.3 in)
Overall height:
1190 mm (46.9 in)
Seat height:
775 mm (30.5 in)
Wheelbase:
1700 mm (66.9 in)
Ground clearance:
140 mm (5.51 in)
Minimum turning radius:
3500 mm (137.8 in)

Weight:
With oil and fuel:
VMX17A 310 kg (683 lb)
VMX17AC 311 kg (686 lb)

Engine:
Engine type:
Liquid cooled 4-stroke, DOHC
Cylinder arrangement:
V-type 4-cylinder
Displacement:
1679 cm³
Bore × stroke:
90.0 × 66.0 mm (3.54 × 2.60 in)
Compression ratio:
11.30 :1
Starting system:
Electric starter
Lubrication system:
Wet sump

Engine oil:
Recommended brand:
YAMALUBE
Type:
SAE 10W-30, 10W-40, 10W-50, 15W-40, 20W-40 or 20W-50



Recommended engine oil grade:
API service SG type or higher, JASO standard MA
Engine oil quantity:
Without oil filter cartridge replacement:
4.30 L (4.55 US qt, 3.78 Imp.qt)
With oil filter cartridge replacement:
4.70 L (4.97 US qt, 4.14 Imp.qt)

Final gear oil:
Type:
Yamaha genuine shaft drive gear oil SAE 80 API GL-5
Quantity:
0.30 L (0.32 US qt, 0.26 Imp.qt)

Cooling system:
Coolant reservoir capacity (up to the maximum level mark):
0.27 L (0.29 US qt, 0.24 Imp.qt)
Radiator capacity (including all routes):
3.75 L (3.96 US qt, 3.30 Imp.qt)

Air filter:
Air filter element:
Oil-coated paper element

Fuel:
Recommended fuel:
Premium unleaded gasoline only
Fuel tank capacity:
15.0 L (3.96 US gal, 3.30 Imp.gal)
Fuel reserve amount:
3.9 L (1.03 US gal, 0.86 Imp.gal)

Fuel injection:
Throttle body:
ID mark:
VMX17A 2S31 00
VMX17AC 2S32 10

Spark plug(s):
Manufacturer/model:
NGK/CR9EIA
Manufacturer/model:
DENSO/IU27D
Spark plug gap:
0.8–0.9 mm (0.031–0.035 in)

Clutch:
Clutch type:
Wet, multiple-disc

Transmission:
Primary reduction system:
Spur gear

Primary reduction ratio:
86/57 (1.509)
Secondary reduction system:
Shaft drive
Secondary reduction ratio:
22/23 × 29/09 (3.082)
Transmission type:
Constant mesh 5-speed
Operation:
Left foot operation
Gear ratio:
1st:
38/16 (2.375)
2nd:
38/21 (1.810)
3rd:
35/25 (1.400)
4th:
29/26 (1.115)
5th:
29/31 (0.935)

Chassis:

Frame type:
Diamond
Caster angle:
31.00 °
Trail:
148.0 mm (5.83 in)

Front tire:

Type:
Tubeless
Size:
120/70R18M/C 59V
Manufacturer/model:
BRIDGESTONE/BT028F

Rear tire:

Type:
Tubeless
Size:
200/50R18M/C 76V
Manufacturer/model:
BRIDGESTONE/BT028R

Loading:

Maximum load:
VMX17A 190 kg (419 lb)
VMX17AC 189 kg (417 lb)
(Total weight of rider, passenger, cargo and accessories)

Tire air pressure (measured on cold tires):

Loading condition:
0–90 kg (0–198 lb)
Front:
250 kPa (2.50 kgf/cm², 36 psi)
Rear:
290 kPa (2.90 kgf/cm², 42 psi)
Loading condition:
VMX17A 90–190 kg (198–419 lb)
VMX17AC 90–189 kg (198–417 lb)
Front:
250 kPa (2.50 kgf/cm², 36 psi)
Rear:
290 kPa (2.90 kgf/cm², 42 psi)
High-speed riding:
Front:
290 kPa (2.90 kgf/cm², 42 psi)
Rear:
290 kPa (2.90 kgf/cm², 42 psi)

Front wheel:

Wheel type:
Cast wheel
Rim size:
18M/C x MT3.50

Rear wheel:

Wheel type:
Cast wheel
Rim size:
18M/C x MT6.00

Front brake:

Type:
Dual disc brake
Operation:
Right hand operation
Recommended fluid:
DOT 4

Rear brake:

Type:
Single disc brake
Operation:
Right foot operation
Recommended fluid:
DOT 4

Front suspension:

Type:
Telescopic fork
Spring/shock absorber type:
Coil spring/oil damper
Wheel travel:
120.0 mm (4.72 in)

Rear suspension:
Type:
Swingarm (link suspension)
Spring/shock absorber type:
Coil spring/gas-oil damper
Wheel travel:
110.0 mm (4.33 in)

Electrical system:
Ignition system:
TCI
Charging system:
AC magneto

Battery:
Model:
YTZ14S
Voltage, capacity:
12 V, 11.2 Ah

Headlight:
Bulb type:
Halogen bulb

Bulb voltage, wattage × quantity:
Headlight:
12 V, 60 W/55 W × 1
Tail/brake light:
LED
Front turn signal/position light:
12 V, 21 W/5.0 W × 2
Rear turn signal light:
12 V, 21.0 W × 2
Auxiliary light:
12 V, 5.0 W × 1
Meter lighting:
LED
Neutral indicator light:
LED
High beam indicator light:
LED
Oil level warning light:
LED
Turn signal indicator light:
LED x 2
Fuel level warning light:
LED
Coolant temperature warning light:
LED
Engine trouble warning light:
LED
ABS warning light:
LED
Shift timing indicator light:
LED

Fuses:
Main fuse:
50.0 A
Headlight fuse:
15.0 A
Signaling system fuse:
15.0 A
Ignition fuse:
20.0 A
Radiator fan fuse:
20.0 A
Sub radiator fan fuse:
7.5 A
Fuel injection system fuse:
15.0 A
ABS control unit fuse:
7.5 A
ABS motor fuse:
30.0 A
ABS solenoid fuse:
15.0 A
Backup fuse:
7.5 A
Electronic throttle valve fuse:
7.5 A

EAU26352

Identification numbers

Record the key identification number, vehicle identification number and model label information in the spaces provided below for assistance when ordering spare parts from a Yamaha dealer or for reference in case the vehicle is stolen.

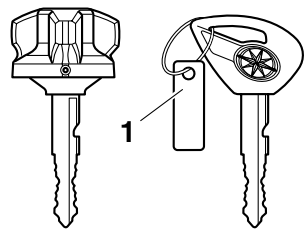
KEY IDENTIFICATION NUMBER:

VEHICLE IDENTIFICATION NUMBER:

MODEL LABEL INFORMATION:

EAU26381

Key identification number

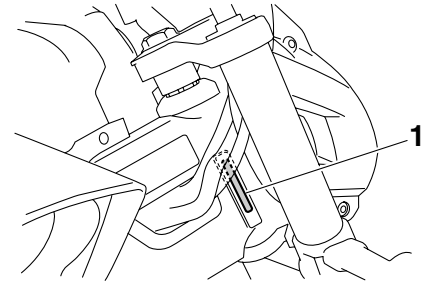


1. Key identification number

The key identification number is stamped into the key tag. Record this number in the space provided and use it for reference when ordering a new key.

EAU26400

Vehicle identification number



1. Vehicle identification number

The vehicle identification number is stamped into the steering head pipe. Record this number in the space provided.

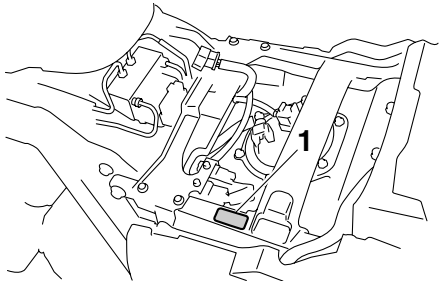
TIP

The vehicle identification number is used to identify your motorcycle and may be used to register your motorcycle with the licensing authority in your area.

10

EAU26470

Model label

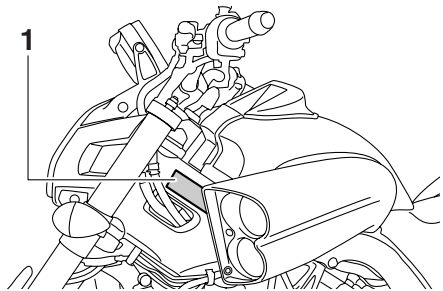


1. Model label

The model label is affixed to the frame under the rider seat. (See page 4-22.) Record the information on this label in the space provided. This information will be needed when ordering spare parts from a Yamaha dealer.

EAU48270

Vehicle Emission Control Information label



1. Vehicle Emission Control Information label

The Vehicle Emission Control Information label is affixed at the location in the illustration. This label shows specifications related to exhaust emissions as required by federal law, state law and Environment Canada.

EAU26551

Reporting safety defects

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Yamaha Motor Corporation, U.S.A. If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or Yamaha Motor Corporation, U.S.A.

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153); go to http://www.safercar.gov; or write to: Administrator, NHTSA, 400 Seventh Street, SW., Washington, DC 20590. You can also obtain other information about motor vehicle safety from http://www.safercar.gov.

EAU26560

Motorcycle noise regulation

TAMPERING WITH NOISE CONTROL SYSTEM PROHIBITED:

Federal law prohibits the following acts or the causing thereof: (1) The removal or rendering inoperative by any person other than for purposes of maintenance, repair, or replacement of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use or (2) the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

“AMONG THOSE ACTS PRESUMED TO CONSTITUTE TAMPERING ARE THE ACTS LISTED BELOW”.

These acts include tampering with the following systems; i.e., modification, removal, etc.

Exhaust system
- Muffler
- Exhaust pipe
- Silencer

Intake system
- Air cleaner case
- Air cleaner element
- Intake duct

EAU26632

Maintenance record

Copies of work orders and/or receipts for parts purchased and installed on your vehicle will be required to document that maintenance has been completed in accordance with the emissions warranty. The chart below is printed only as a reminder that maintenance work is required. It is not acceptable proof of maintenance work.

Maintenance interval	Date of service	Mileage	Servicing dealer name and address	Remarks
600 mi (1000 km) or 1 month				
4000 mi (7000 km) or 6 months				
8000 mi (13000 km) or 12 months				
12000 mi (19000 km) or 18 months				
16000 mi (25000 km) or 24 months				
20000 mi (31000 km) or 30 months				
24000 mi (37000 km) or 36 months				
28000 mi (43000 km) or 42 months				
32000 mi (49000 km) or 48 months				

Maintenance interval	Date of service	Mileage	Servicing dealer name and address	Remarks
36000 mi (55000 km) or 54 months				
40000 mi (61000 km) or 60 months				

EAU26663

YAMAHA MOTOR CORPORATION, U.S.A. STREET AND ENDURO MOTORCYCLE LIMITED WARRANTY

Yamaha Motor Corporation, U.S.A. hereby warrants that new Yamaha motorcycles will be free from defects in material and workmanship for the period of time stated herein, subject to certain stated limitations.

THE PERIOD OF WARRANTY for Yamaha motorcycles originally equipped with headlight, stoplight, and turn signals shall be one (1) year from the date of purchase, with no mileage limitation.

MODELS EXCLUDED FROM WARRANTY include those used for non-Yamaha-authorized renting, leasing or other commercial purposes, and TZ models.

DURING THE PERIOD OF WARRANTY, any authorized Yamaha motorcycle dealer will, free of charge, repair or replace any part adjudged defective by Yamaha due to faulty workmanship or material from the factory. Parts used in warranty repairs will be warranted for the balance of the product's warranty period. All parts replaced under warranty become property of Yamaha Motor Corporation, U.S.A.

GENERAL EXCLUSIONS from this warranty shall include any failures caused by:
a) Competition or racing use.
b) Installation of parts or accessories that are not qualitatively equivalent to genuine Yamaha parts.
c) Abnormal strain, neglect, or abuse.
d) Lack of proper maintenance.
e) Accident or collision damage.
f) Modification to original parts.

SPECIFIC EXCLUSIONS from this warranty shall include parts replaced due to normal wear or routine maintenance.

THE CUSTOMER'S RESPONSIBILITY under this warranty shall be to:
1. Operate and maintain the motorcycle as specified in the appropriate Owner's Manual, and
2. Give notice to an authorized Yamaha motorcycle dealer of any and all apparent defects within ten (10) days after discovery, and make the machine available at that time for inspection and repairs at such dealer's place of business.

WARRANTY TRANSFER: To transfer the warranty from the original purchaser to any subsequent purchaser, it is imperative that the machine be inspected and registered for warranty by an authorized Yamaha motorcycle dealer. In order for this warranty to remain in effect, this inspection and registration must take place within ten (10) days after transfer. An inspection and registration fee will be charged for this service.

EMISSION CONTROL SYSTEM WARRANTY:
Yamaha Motor Corporation, U.S.A. also warrants to the ultimate purchaser and each subsequent purchaser of each Yamaha motorcycle covered by this warranty with a displacement of 50cc or greater, that the vehicle is designed, built, and equipped so as to conform at the time of sale with all U.S. emissions standards applicable at the time of manufacture and that it is free from defects in materials and workmanship which would cause it not to meet these standards within the period listed immediately below. Failures other than those resulting from defects in material or workmanship, which arise solely as a result of owner abuse and/or lack of proper maintenance, are not covered by this warranty.

Engine Displacement	Period
Under 50cc	6,000 km (3,750 miles) or five years, whichever occurs first
50cc to 169cc	12,000 km (7,465 miles) or five years whichever occurs first
170cc to 279cc	18,000 km (11,185 miles) or five years, whichever occurs first
280cc and over	30,000 km (18,641 miles) or five years, whichever occurs first

YAMAHA MOTOR CORPORATION, U.S.A. MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED. ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE OBLIGATIONS AND TIME LIMITS STATED IN THIS WARRANTY ARE HEREBY DISCLAIMED BY YAMAHA MOTOR CORPORATION, U.S.A. AND EXCLUDED FROM THIS WARRANTY.

SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. ALSO EXCLUDED FROM THIS WARRANTY ARE ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING LOSS OF USE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE EXCLUSION MAY NOT APPLY TO YOU.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

YAMAHA MOTOR CORPORATION, U.S.A.
P.O. Box 6555
Cypress, California 90630

WARRANTY QUESTIONS AND ANSWERS

Q. What costs are my responsibility during the warranty period?
A. The customer's responsibility includes all costs of normal maintenance services, non-warranty repairs, accident and collision damages, and oil, oil filters, air filters, spark plugs, and brake shoes.

Q. What are some examples of "abnormal" strain, neglect, or abuse?
A. These terms are general and overlap each other in areas. Specific examples include: Running the machine out of oil, sustained high rpm, full-throttle, operating the machine with a broken or damaged part which causes another part to fail, damage or failure due to improper or careless transportation and/or tie-down. If you have any specific questions on operation or maintenance, please contact your dealer for advice.

Q. Does the warranty cover incidental costs such as towing or transportation due to a failure?
A. No. The warranty is limited to repair of the machine itself.

Q. May I perform any or all of the recommended maintenance shown in the Owner's Manual instead of having the dealer do them?
A. Yes, if you are a qualified mechanic and follow the procedures specified in the Owner's and Service Manual. We do recommend, however, that items requiring special tools or equipment be done by a Yamaha motorcycle dealer.

Q. Will the warranty be void or cancelled if I do not operate or maintain my new motorcycle exactly as specified in the Owner's Manual?
A. No. The warranty on a new motorcycle cannot be "voided" or "cancelled." **However, if a particular failure is caused by operation or maintenance other than as described in the Owner's Manual, that failure may not be covered under warranty.**

Q. What responsibility does my dealer have under this warranty?
A. Each Yamaha motorcycle dealer is expected to:
1. Completely set up every new machine before sale.
2. Explain the operation, maintenance, and warranty requirements to your satisfaction at the time of sale, and upon your request at any later date.
3. Each Yamaha motorcycle dealer is held responsible for his setup, service and warranty repair work.

Q. Is the warranty transferable to second owners?
A. Yes. The remainder of the existing warranty can be transferred upon request. The unit has to be inspected and re-registered by an authorized Yamaha motorcycle dealer for the policy to remain effective.

CUSTOMER SERVICE

If your machine requires warranty service, you must take it to any authorized Yamaha motorcycle dealer within the continental United States. Be sure to bring your warranty registration card or other valid proof of the original date of purchase. If a question or problem arises regarding the warranty, first contact the owner of the dealership. Since all warranty matters are handled at the dealer level, this person is in the best position to help you. IF you are still not satisfied and require additional assistance, please write to:

YAMAHA MOTOR CORPORATION, U.S.A.
CUSTOMER RELATIONS DEPARTMENT
P.O. Box 6555
Cypress, California 90630

When contacting Yamaha Motor Corporation, U.S.A., don't forget to include any important information such as names, addresses, model, V.I.N. (frame number), dates, and receipts.

CHANGE OF ADDRESS

The federal government requires each manufacturer of a motor vehicle to maintain a complete, up-to-date list of all first purchasers against the possibility of a safety-related defect and recall. This list is compiled from the purchase registrations sent to Yamaha Motor Corporation, U.S.A. by the selling dealer at the time of your purchase.

If you should move after you have purchased your new motorcycle, please advise us of your new address by sending a postcard listing your motorcycle model name, V.I.N. (frame number), dealer number (or dealer's name) as it is shown on your warranty card, your name and new mailing address. Mail to:

YAMAHA MOTOR CORPORATION, U.S.A.
P.O. Box 6555
Cypress, California 90630
Attention: Warranty Department

This will ensure that Yamaha Motor Corporation, U.S.A. has an up-to-date registration record in accordance with federal law.

EAU26750

YAMAHA EXTENDED SERVICE (Y.E.S.)

Keep your Yamaha protected even after your warranty expires with genuine Yamaha Extended Service (Y.E.S.).

- Y.E.S. is designed and administered by Yamaha Motor Corporation to provide maximum owner satisfaction. You get uninterrupted factory-backed coverage for extra peace of mind.
- Y.E.S. is flexible. You choose the plan that's right for you: 12 months, 24 months, 36 months or, on certain models, even 48 months beyond your warranty period.
- Y.E.S. is designed and administered by the same Yamaha people who handle your warranty – and it shows in the comprehensive coverage benefits. There are no mileage limitations. Coverage isn't limited to "moving parts" or the "drive train" like many other plans. And Y.E.S. covers manufacturing defects just like the warranty. See the sample contract at your Yamaha dealer to see how comforting uninterrupted factory-backed protection can be.
- You don't have to pay anything for covered repairs. There's no deductible to pay, and repairs aren't "pro-rated." You don't have any "out-of-pocket" expenses for covered repairs.
- In addition, Travel and Recreation Interruption Protection (TRIP) is included at no extra cost. TRIP gives you up to $150 reimbursement per occurrence for any reasonable expenses you incur because your Yamaha needs covered service: replacement vehicle rental, emergency towing, phone calls, even food and lodging when you are away from home. This superb coverage goes into effect when you purchase Y.E.S., so it applies to any warranty repairs as well as covered repairs during your entire Y.E.S. plan period.
- Y.E.S. coverage is honored at any authorized Yamaha dealer nationwide.
- Y.E.S. coverage is transferable to a new owner if you sell or trade-in. That can make your Yamaha much more valuable!

This excellent Y.E.S. plan coverage is only available to Yamaha owners like you, and only while your Yamaha is still within the Yamaha Limited Warranty period. So visit your authorized Yamaha dealer to get all the facts. He can show you how easy it is to protect your investment with Yamaha Extended Service.

We urge you to act now. You'll get the excellent benefits of TRIP coverage right away, and you'll rest easy knowing you'll have strong factory-backed protection even after your Yamaha Limited Warranty expires.

A special note:
If visiting your dealer isn't convenient, contact Yamaha with your Primary ID number (your frame number). We'll be happy to help you get the Y.E.S. coverage you need.

Yamaha Service Marketing
P.O. Box 6555
Cypress, CA 90630
1-(866)-YES-EXTD (1-866-937-3983)

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PROTECT YOUR INVESTMENT

Use Genuine YAMAHA Parts And Accessories

See your Authorized YAMAHA Dealer for a Genuine YAMAHA Service Manual.

YAMAHA

YAMAHA MOTOR CO., LTD.

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